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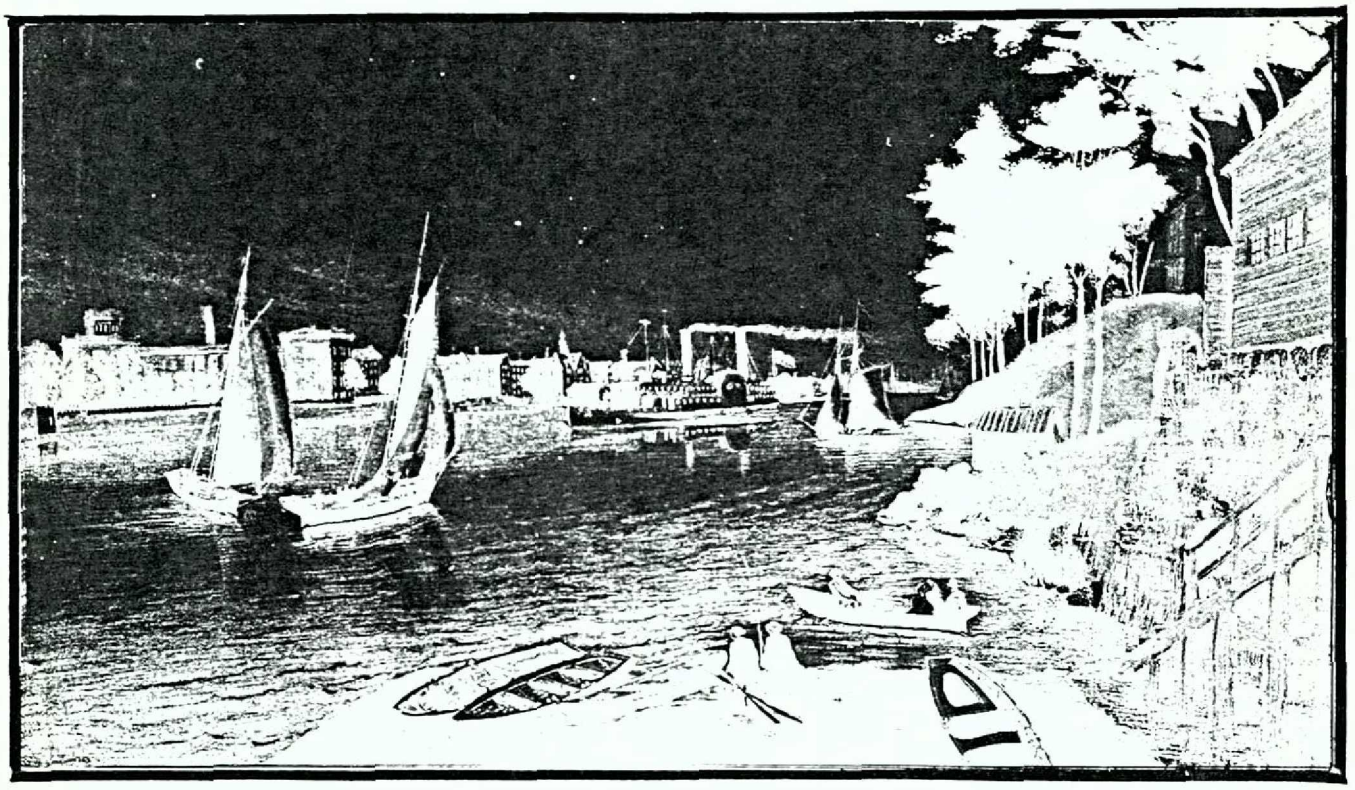
An Archaeological Evaluation of the Northtown Phase II Project Area, Roosevelt Island, New York

Geismar 1985



prepared for
The Starrett Housing Development Corporation
New York, New York

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prepared by
Joan H. Geismar, Ph.d.
New York, New York

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INTRODUCTORY SUMMARY AND RECOMMENDATIONS

Introductory Summary

This report presents an evaluation of the archaeological potential of the proposed Northtown Phase II development on Roosevelt Island, New York. An agreement between the Urban Development Corporation (UDC), lessees of the property from New York City, and Roosevelt Island Associates, the developers who have requested an FHA mortgage from HUD, required a Federal assessment of impact. The archaeological evaluation was initiated by the developers acting on the recommendation of the State Historic Preservation Officer (SHPO) and in accordance with the Advisory Council on Historic Preservation's regulations, "Protection of Historic and Cultural Properties," 36 CFR 800.

Following the most effective method for this type of evaluation, a site-specific history was compiled from which recommendations could be made (a Stage 1a evaluation). Archaeological field testing, a second phase of the evaluation (a Stage 1b), also might have been performed, but in this instance it does not appear to be necessary.

Roosevelt Island is a narrow strip of rocky but fertile land that parallels Manhattan and divides the East River into two channels between Forty-sixth and Eighty-sixth Streets (Figure 1). It is a property that has changed hands only four times in the three and a half centuries since its was purchased from the Indians by Wouten Van Twiller, then the Dutch Governor of Nieuw Amsterdam. In 1828, after it was bought by New York City, its current owner, it became a nucleus of the city's correctional and

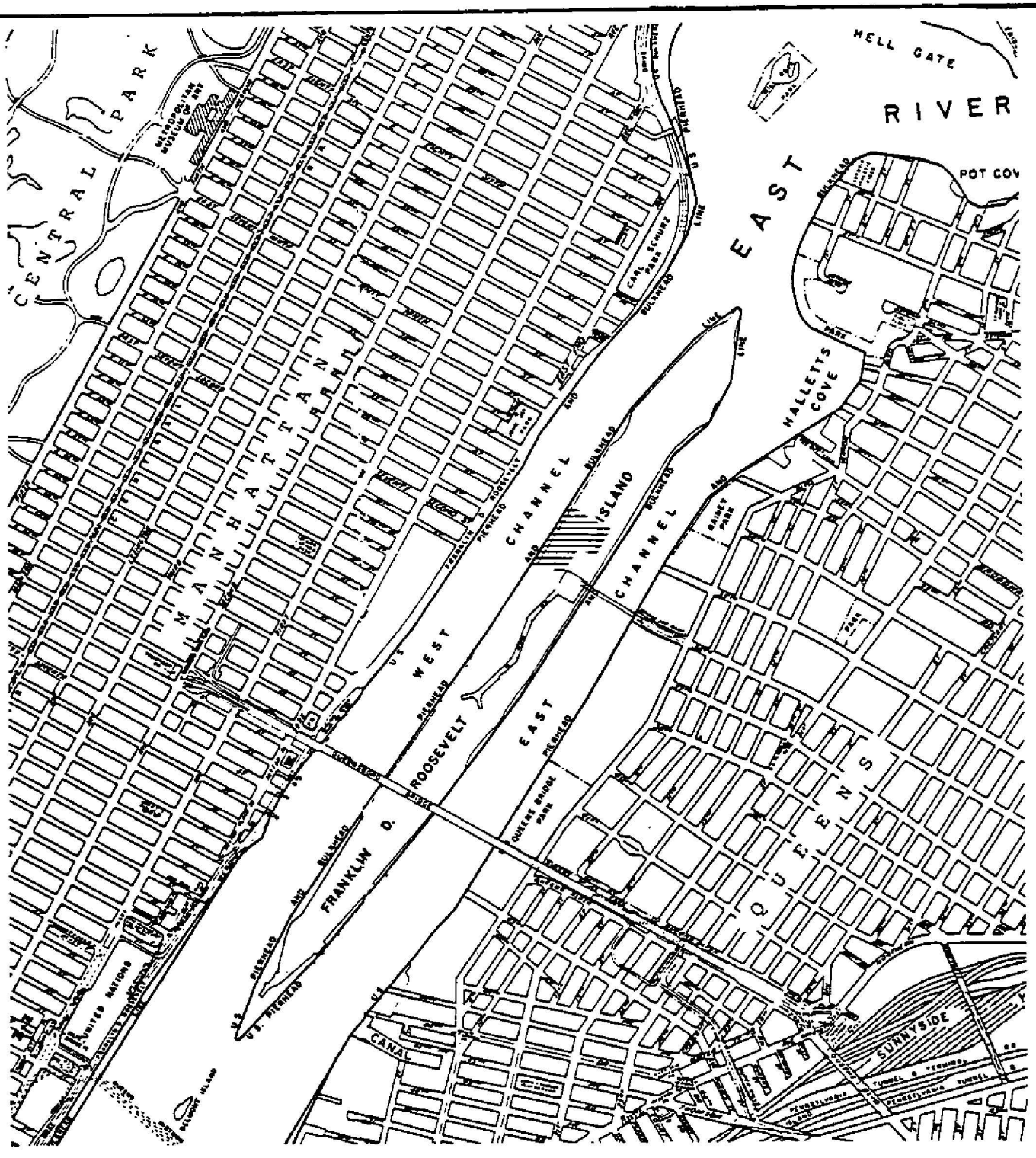

Figure 2. Northtown Phase II: Site Location

charitable institutions. Its solely institutional function persisted for almost 150 years, and two city hospitals are still located on the island. Since the early-1970s, it has been mainly residential, and the proposed Northtown II development, which includes housing and community buildings, will increase the residential units on the island by fifty percent.

Currently, there are no buildings standing in the project area which is bounded to the west by a promenade along the west channel of the East River and, except for a small area, to the east by Main Street (Figure 2). (A parking lot that extends eastward from Main Street will also be developed as an extension to the existing Motorgate parking garage.) The southern portion of the site, which is adjacent to a field and baseball diamond that may be the future site of a school, is now used by island residents as a community garden. However, as recently as three or four years ago buildings that were part of the New York City Fire Department Training College were situated on the site, and their remnants are still visible (Plates 1-8).

In the last century, convict labor was used to quarry the stone and construct the island's socially and architecturally significant buildings. These buildings were often either designed or architecturally supervised by renowned contemporary architects such as James Renwick, Jr. and A. J. Davis. By the end of the century, with a population estimated at 7,000, there were seven major institutions and their numerous auxiliary buildings as well as a lighthouse on what was then known as Blackwell's Island.

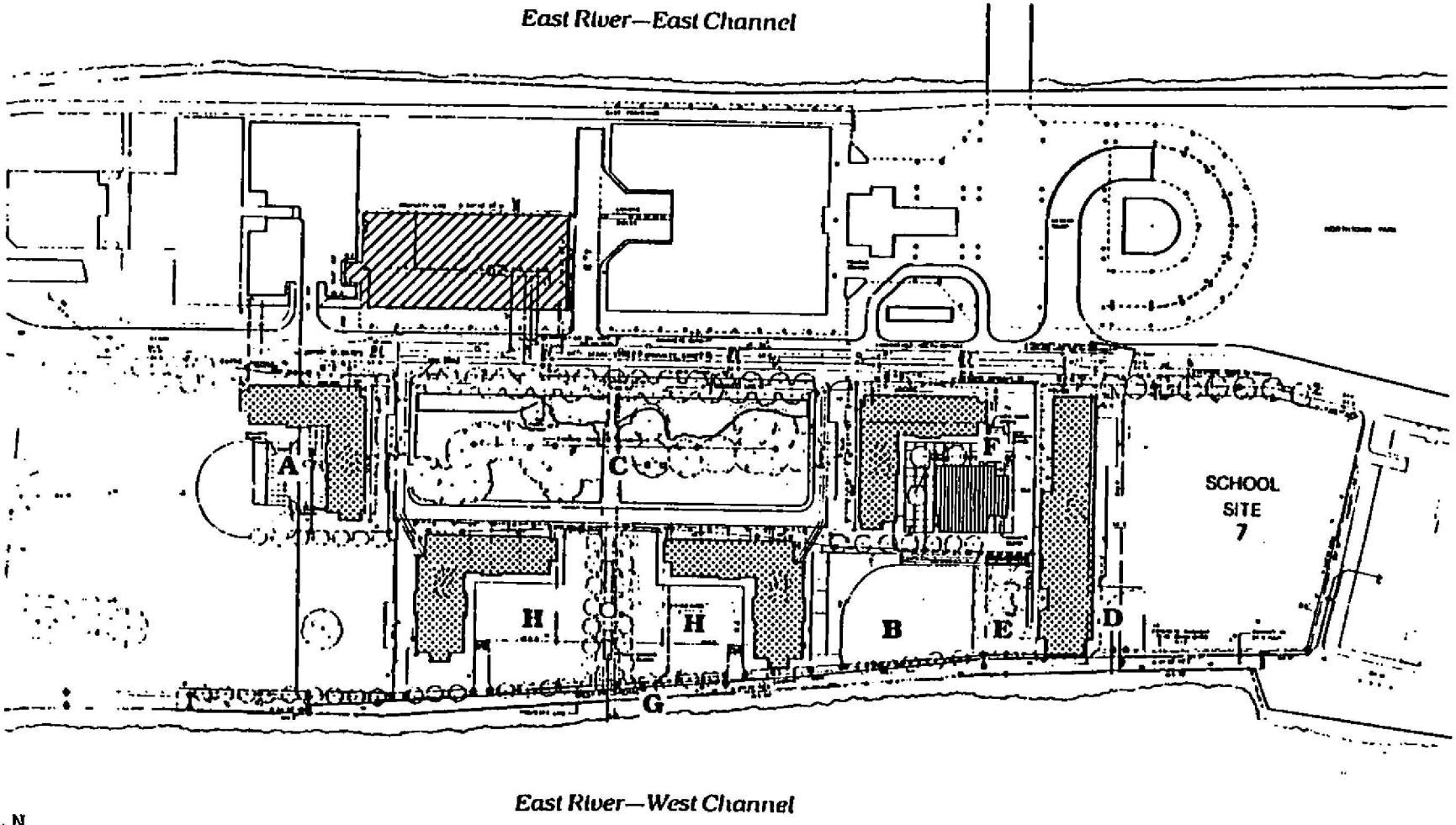

Figure 2. NORTHTOWN PHASE II: Proposed Development (AKRF, Inc. 1985:Figure 7--modified)

Plate 1. View north along the West Promenade, Roosevelt Island, just south of the project area. Manhattan is on left, and construction scaffolding for a water tunnel is in rear of picture (photo: March, 1985)

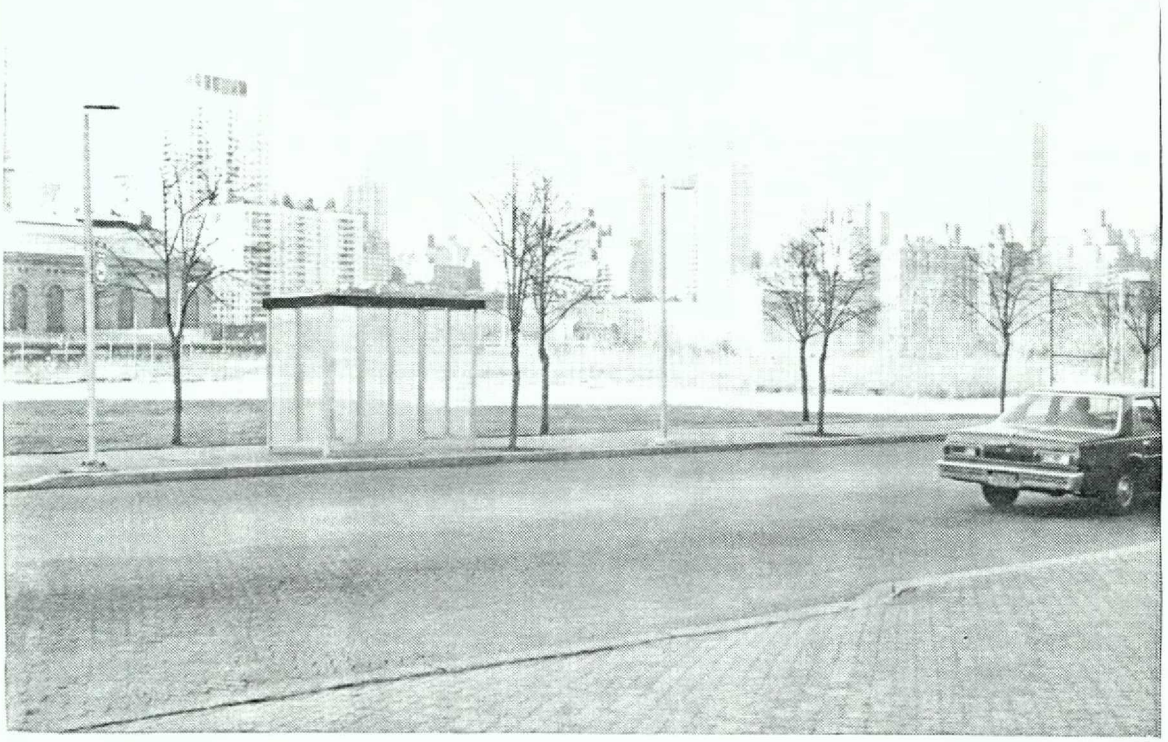

Plate 2. Northwest view across Main St. opposite a field and baseball diamond proposed as a future school site. All buildings seen in the background are in Manhattan (photo: March, 1985)

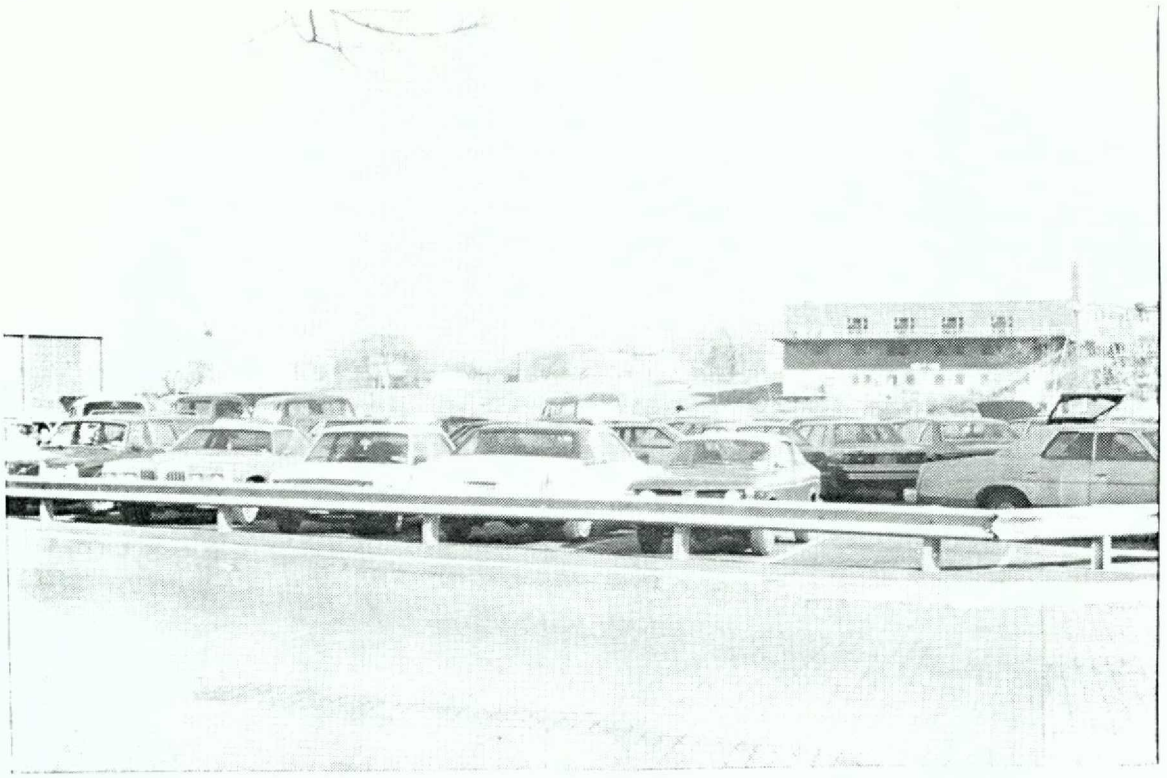

Plate 3. East view from Main St. to parking lot that will be developed as an addition to the existing Motorgate parking facility. The AVAC building, the trash removal center for the island, is on the left; the building to the rear is on Long Island (photo: March, 1985)

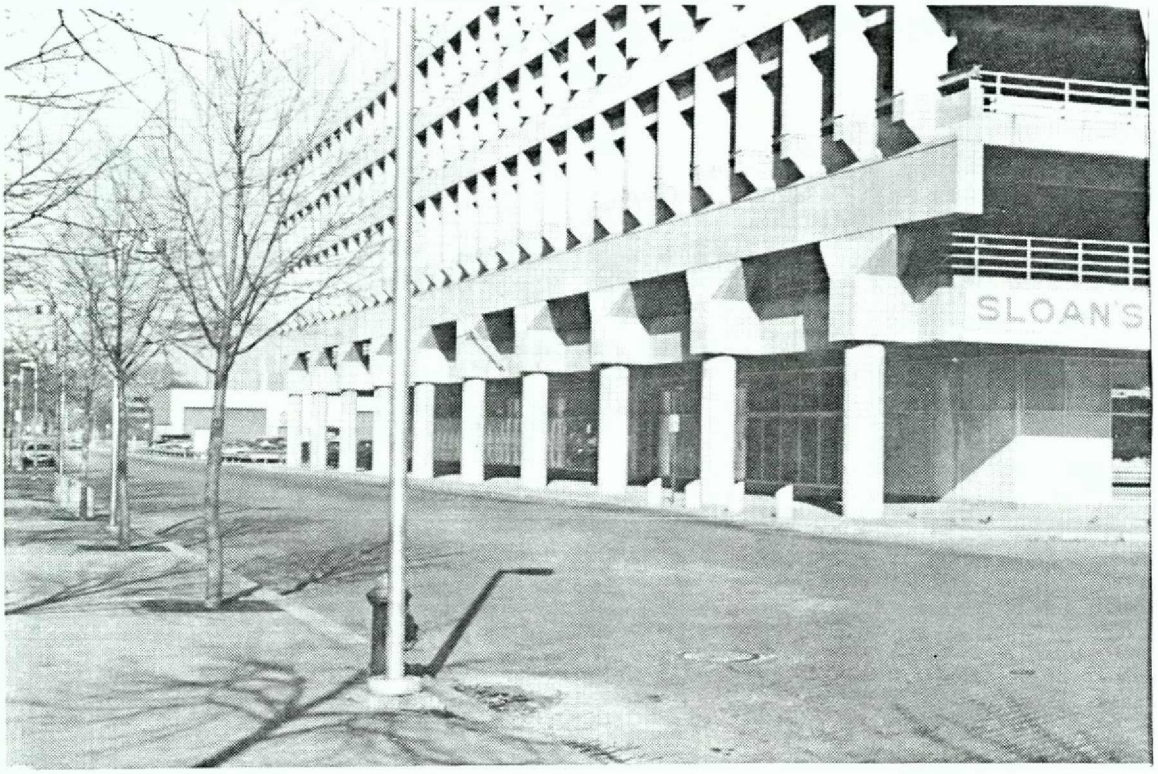

Plate 4. The Motorgate parking facility (and Sloan's Market) built in the 1970s as part of the Northtown I development. View looking northeast up Main St. from the southern part of the project area. Parking lot and AVAC building seen in Plate 3 are to the rear (photo: March, 1985)

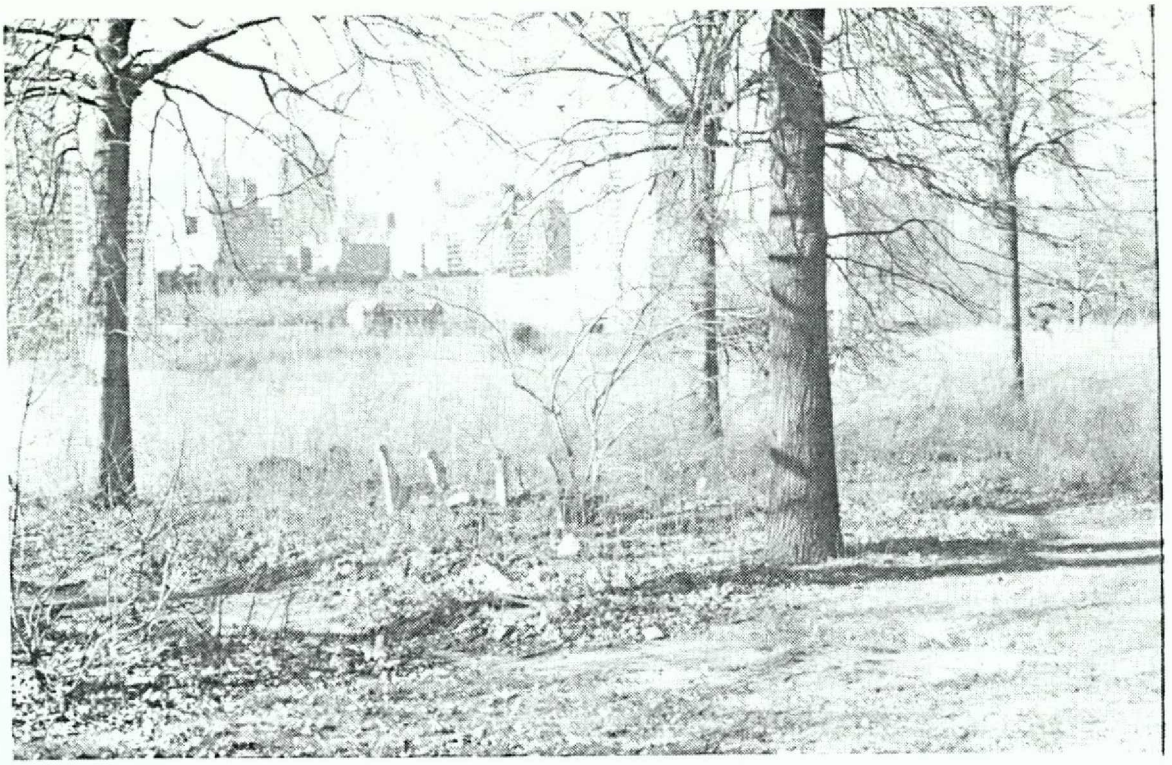

Plate 5. View west across site from near Main St. Buildings in rear of picture are in Manhattan (photo: March, 1985)

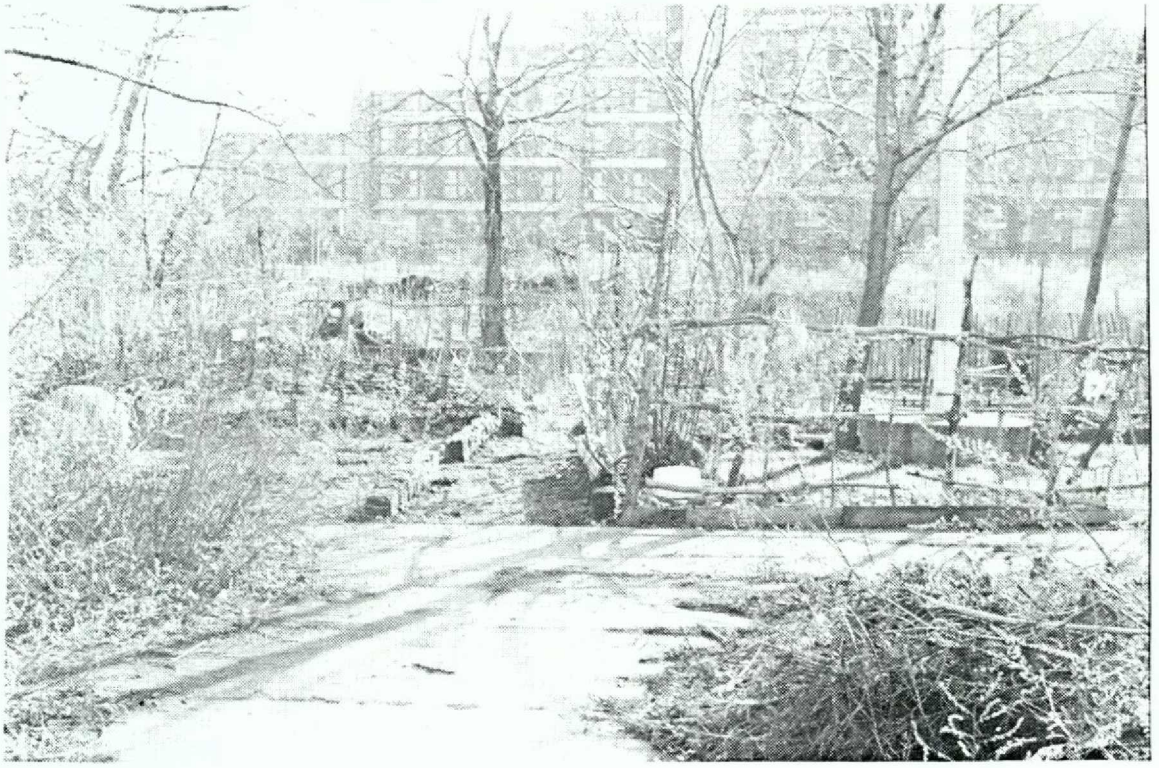

Plate 6. Community gardens clustered on southern part of site; Northtown I housing in rear of picture. Cement plaza and flagpole are remnants of the Fire Training College administration building until recently located on the site (photo: March, 1985)

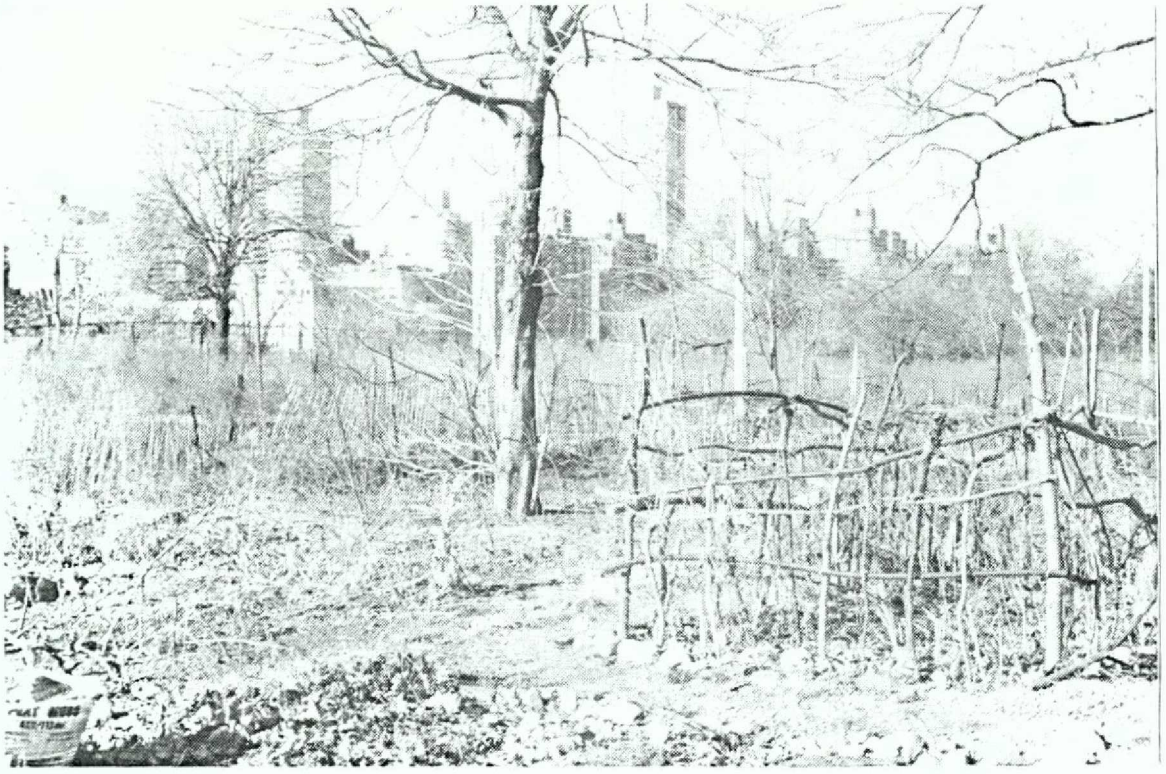

Plate 7. Community gardens in the vicinity of the Fire College administration building site, looking northwest. Note there are two flagpoles (see Plate 6) that once flanked the approach. Buildings are on Manhattan (photo: March, 1985)

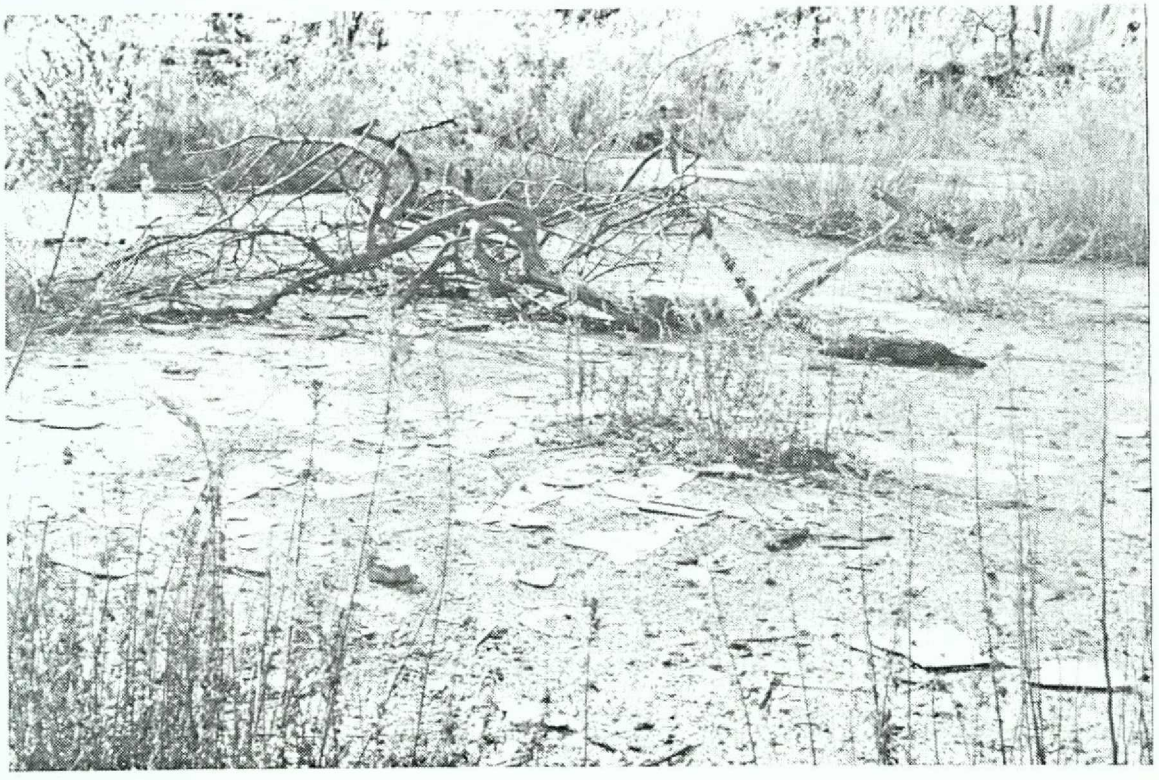

Plate 8. All that remains of the Fire College administration building is a cement floor and asphalt and ceramic tile (photo: March, 1985)

Still identifiable but in varying states of preservation are the long-abandoned Smallpox and City Hospitals located on the southern part of the island; north of the the project area is the ruin of the Octagon Tower, the central wing of the New York City Lunatic Asylum (unfortunately, this tower was severely fire-damaged by vandals in 1982). These are but three of the seven structures on the island that are currently on the National Register of Historic Places and, with the exception of the City Hospital, are landmarked by New York City (Figure 3).

The Penitentiary, the island's first institution which opened in 1829, and the Workhouse, a building under construction in 1850 as a prison for short-term offenders such as drunks or vagrants, were demolished in 1936 and 1937. For approximately eighty-five years, the Workhouse dominated the project area as well as the eastern view from Manhattan between 72nd and 75th streets (Plate 9).

After the Workhouse was razed, a camp for convalescents opened on its site in 1939; by the 1960s, the camp buildings had become part of the Fire Training College for the New York City Fire Department. A tower that was the last training building on the site was demolished as recently as the early 1980s. This structure was located on the east side of Main Street on what is now a parking lot scheduled to become part of the expanded Motor-gate parking garage (see Plates 3 and 4).

One concern of the current archaeological evaluation was the possibility that the proposed development might impact un-known prehistoric cultural material. However, the construction

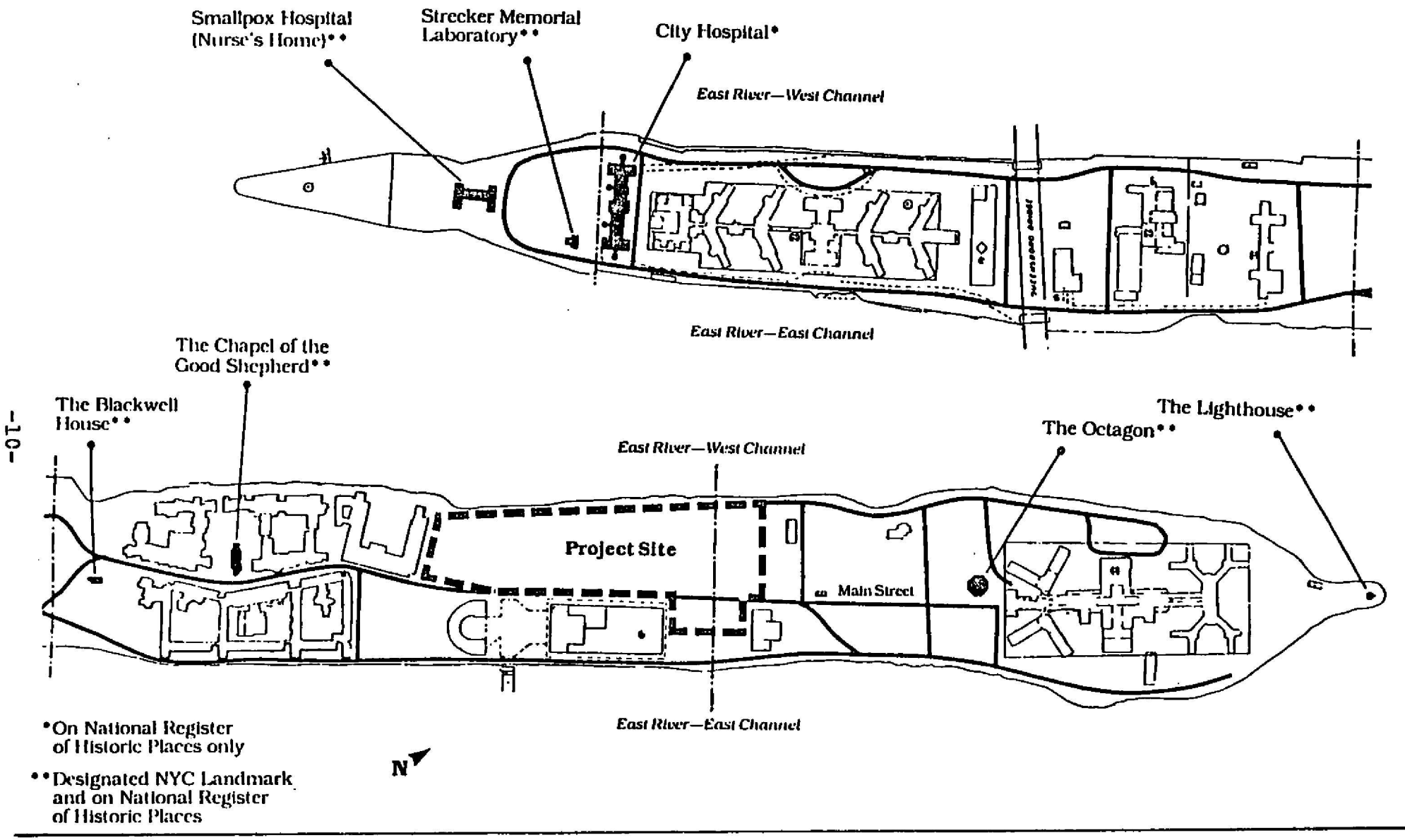

Figure 3. NORTHTOWN PHASE II: Landmarks on Roosevelt Island (AKRF 1985:Figure 19)

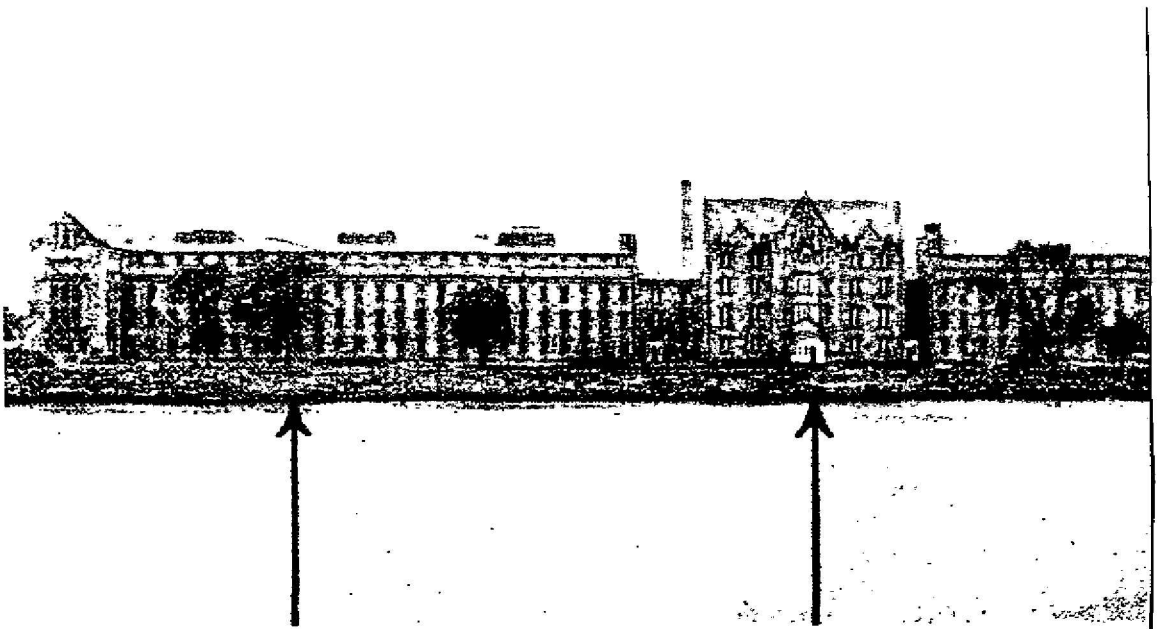

Plate 9. View of the north wing (Women's Workhouse), the administration or "Central" or "Middle" building, and part of the Men's south wing as seen from Manhattan (photo: ca. 1936). The Central building appears changed from earlier pictures (see Plates 14, 18-20). A fire severly damaged this part of the Workhouse in 1917, and this high-roofed structure apparently replaced the original, lower construction. An addition to this part of the building is documented after 1895 (see Figures 4 and 5); it appears that the building expanded up as well as out (photo: Harris 1936:opp. p. 48)

of the Workhouse, which entailed removing 1000 cubic yards of rock when its southern wing was built, its demolition, and the subsequent development of the project area would have disturbed or destroyed any prehistoric material that might have been located on the site. Given this information, it remains to evaluate the cultural significance of the Workhouse foundation that may still exist within the project area.

Because the Workhouse was demolished almost five decades ago, its existence and location are not common knowledge. However, maps and atlases dating from the 1870s establish its position as does an 1895 New York City Tax Assessment map (Figure 4). In addition, late-nineteenth and early-twentieth-century photographs and prints document its western, or front, facade, its north and south wings and cross-wings, a small segment of its eastern, or rear, view, and the neat appearance of its lawns (see Plates 18-20). Based on current development plans and those of the workhouse itself, it appears that the foundation of this building or its remnants fall mainly within the confines of a landscaped plaza included in the project's proposed development (see Figure 6).

Written accounts from the 1860s and 1870s record the annual number of Workhouse inmates and their activities over several years. These same accounts offer clues as to how at least some of the building's water and sanitation needs were met (for example, water was apparently supplied through the Croton Water Supply system). They also inadvertently document the concerns and prejudices of the institution's various superintendents and, to some degree, reflect the social attitudes of their time.

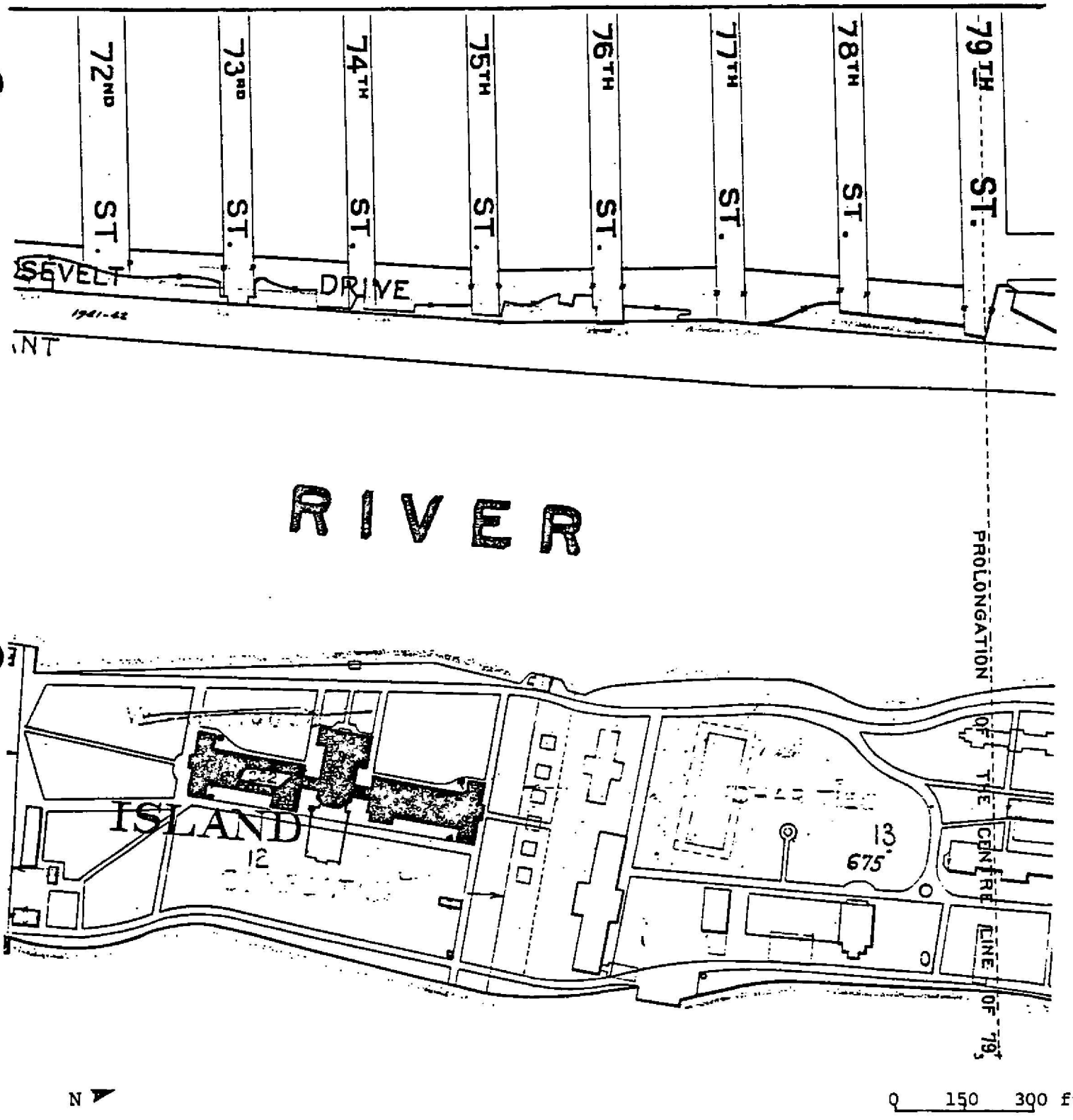

Figure 4. NORTHTOWN PHASE II: 1895 Tax Assessment Map--Detail of Workhouse and Project Area (map theoretically updated to 1949 development of the site in the 1930s). (Block Map of Taxes and Assessments, Section 5, Bol. 2, Part 2, Block 1347-1373, Plate 34) Workhouse indicated in black

The illustrative material available for the Workhouse suggests that the only significant information that might be derived from its archaeological investigation would come from the building's rear, or eastern side, which was undoubtedly considered its backyard area. This aspect of the building, which is only minimally documented in photographs or prints, is where abandoned privies, cisterns, and trash dumps, the features from which archaeologists often retrieve valuable information, might have been situated. However, if these features were located behind the building, or even nearer the eastern channel of the river, they would have been severely damaged or destroyed in the early-1970s during the construction of parking facilities and in the course of grading for the island's new main street. They also would have been affected by the installation of waste pipes for the island's trash removal system (AVAC) and utility lines. Fortunately, the extensive documentation available for the Workhouse and for similar penal institutions lessens the impact of the loss of this potential archaeological information.

Recommendations

Without question, the Workhouse building that dominated the site of the proposed Northtown II development from the last half of the nineteenth century through the first three and a half decades of the twentieth was historically, culturally, and socially significant. However, much of what remains of its foundation apparently will be preserved under a landscaped plaza; moreover, it does not appear that archaeology in adjacent areas would offer information that is not avialable from written

sources. This is partially due to the wealth of information contained in these records and partially because cisterns, privies, and trash dumps, the source of important archaeological data, may not have been located within the project area, or, if they were, were undoubtedly destroyed by subsequent construction.

Although traditional field archaeology is not recommended, it is suggested that a landscaped plaza planned for the project, which will encompass a large portion of the Workhouse site, include some form of commemoration of this institution, a building that undoubtedly would have been considered historically, architecturally, and socially significant had it still been standing. This is a recommendation that is currently under consideration by the Starrett Housing Development Corporation, the site's developers, and Quennell Rothschild, its landscape architects. At this writing, a plan is being considered to expose and incorporate part of the foundation within the plaza site while preserving its established trees. At the very least, a commemorative plaque is recommended although this would be considerably less effective and satisfactory than including the foundation in the plaza design.

In addition, it is recommended that an archaeologist photograph any foundation walls exposed within the plaza. This would provide a record of the building techniques used in the foundation, yet is a field procedure that easily could be coordinated with the planned landscaping.

The evaluation and recommendations presented here are based on the detailed information found in the following sections

of the report. These include a description of the site's setting and an outline of its general and specific history as well as other data relevant to the assessment of its archaeological potential; it also includes a bibliography and an appendix reproducing the Workhouse superintendent's report from 1863.

SETTING

Introduction

The setting of any potential archaeological site is a major factor in its formation. To be considered is its environment in the broadest sense of the word, including its physical, historical, and social aspects. In the case of the Northtown II project area, much of this information is available through archival research. What emerges is not only a fairly extensive record, but also the sequence of development that has eliminated the need for archaeological fieldwork.

Geological and Physical Setting

The physical environment of Roosevelt Island is relatively uncomplex. It represents approximately a mile and a half-long rock outcrop of highly resistant gneiss situated between more easily weathered dolomite, a circumstance that created the island and its channels in the East River (Ostrofsky 1985: personal communication). It is this gneiss, representing the oldest rock formation in New York City (Schuberth 1968:82), that was quarried in the nineteenth century for the construction of the island's institutions and surrounding seawall (building this seawall may have been among the first activities that purposely or inadvertently extended the island's landmass).

Except where this rock is exposed, the island has a variable but fairly shallow cover of glacial till, the result of the New York area's most recent major geological event, the retreat of the last glacial ice advance about 12,000 years ago. To the pre-contact Indians, this island may have been a resting and fishing place between Long Island and Manhattan. To the first European settlers, the cover of fertile soil offered potential farmland while its island situation provided protected pasturage (see History section this report). It should be remembered, however, that the island's location was not convenient to these early settlers since it was quite far north of Nieuw Amsterdam, the hub of seventeenth-century European settlement.

It appears that both the topography and the configuration of the island have been altered during its development. An 1897 topographic map indicates that all ground surfaces in the project area were then less than 20 ft. above mean sea level (USGS 1897). Yet, a recent site-specific topographic map records areas that now exceed 30 ft. (Reid 1978), a variation that cannot be explained by the 2.265 ft. difference between the mean sea level datum used in 1897 and the MLW of Belmont Island datum used today. In addition, test borings for the project area suggest that sections of the site have been extensively filled and that rock may have been blasted in the vicinity of the Workhouse (see Test Boring Data, this report). And finally, deposits of concrete visible near the west promenade attest to recent construction and land alteration (Plate 10).

Plate 10. View to southwest from near field and baseball diamond. What appear to be boulders is mainly trashed concrete. New York Hospital in Manhattan is to rear of picture (photo: March, 1985)

The fact that the island's configuration has changed since its acquisition by New York City in 1828 is suggested by the number of acres it apparently has amassed in the last 153 years. For example, in 1784, the Blackwell family unsuccessfully offered the 107-acre island for sale (Stokes V 1926:1187; see General History below). In 1828, the deed to New York City recorded 109 acres (Liber 239:287), indicating little or no change. However,in 1894, its size was approximately 120 acres (King 1894:492), and currently it comprises 147 acres (AKRF 1985:S-1). In part, the growing acreage may be an effect of improved surveying techniques, but undoubtedly filling has occurred over time.

The seawall first built by convicts in the mid-nineteenth century and currently being improved (Plates 11 and 12) may account for some of the island's growth, and it appears that filling on the north end of the island was among the activities of the male inmates of the Workhouse in 1876 (CPCCAR 1876:259). In addition, some of the spoil from a water tunnel currently under construction north of the project area is being deposited off the south end of the island. For forty years this area has also been a repository for demolition debris, while filling on the north end has extended Lighthouse Park by at least an acre in the last seven or eight years (Louglin 1985:personal communication).

It appears, then, that much of the island's terrain has been filled and reshaped, processes that could disturb or destroy archaeological resources. Further damage to these resources undoubtedly occurred during construction episodes. For example, the shallowness of the bedrock is known to have required some blasting

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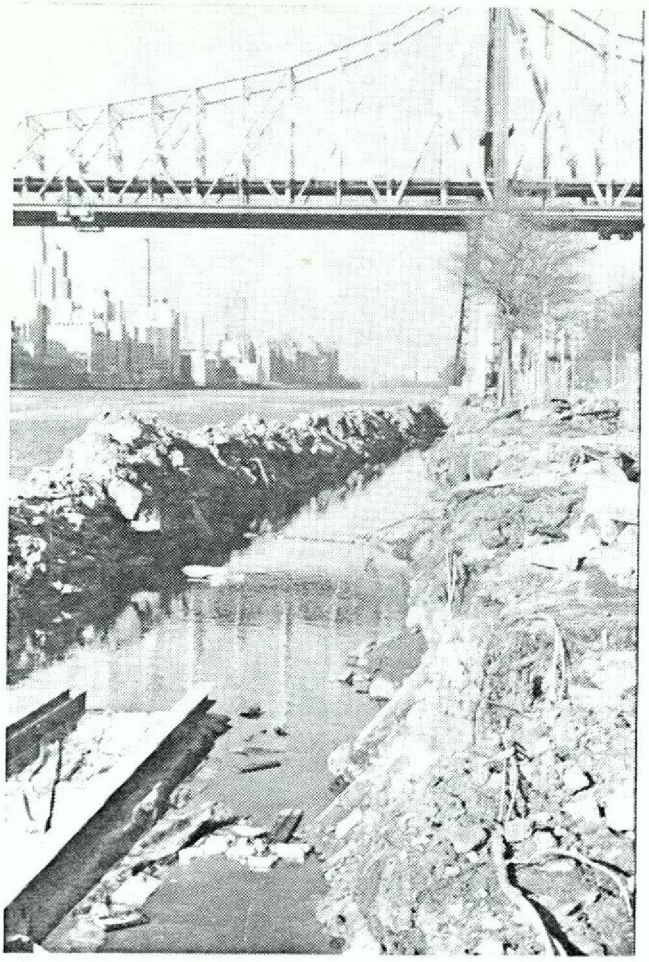


Plate 11. View looking north from vicinity of the Goldwater Memorial Hospital. The Queensboro, or 59th Street, Bridge is ahead. Rock wall to the left is the western seawall which is currently under construction. Manhattan can be seen to the left (photo: March, 1985)

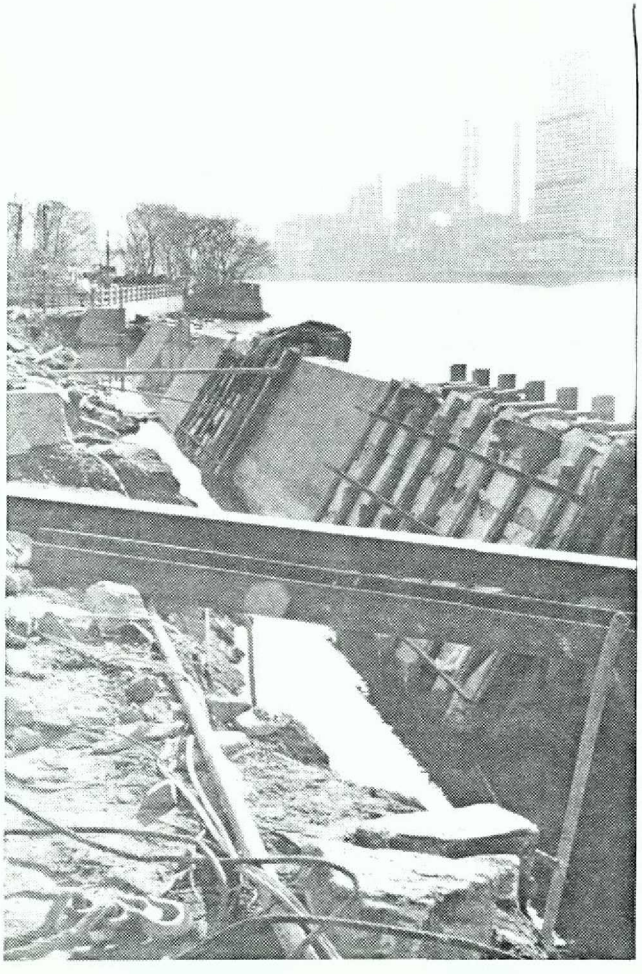


Plate 12. Seawall construction looking south. United Nations headquarters is in right background. (photo: March, 1985)

when the Workhouse was built in the nineteenth century and during the laying of utility and waste removal lines in the twentieth (Richmond 1871:542; Hinninger 1985:personal communication; Martimucci 1985:personal communication). This would have contributed to the destruction of any fragile prehistoric deposits within the project area. It should be noted that service lines installed beyond the back, or eastern side, of the Workhouse and the grading of Main Street as well as other recent construction activities also would have damaged or obliterated features associated with the building.

What we have, then, is a situation where the geology and the terrain of the site, as well as its development, clearly contributed to the destruction of what might have been viable cultural resources. However, the island's intensive development as a center of correction and charitable institutions was extensively recorded. Consequently, the historical and social aspect of the island and the site can be reconstructed.

General Historical Reconstruction

The history of Roosevelt Island is well documented (for example, see AKRF 1985:56-59). A 1637 Indian deed to Wouton Van Twiller, then Dutch governor of Nieuw Amsterdam, records the initial purchase of the island; however, a 1639 map shows no evidence of settlement (Plate 13) although the land apparently was used for farming and grazing at this time (AKRF 1985:56). Originally known as Varckens Eylandt in Dutch, or Hog Island, its name may document its use as a pasture for swine, or it may refer

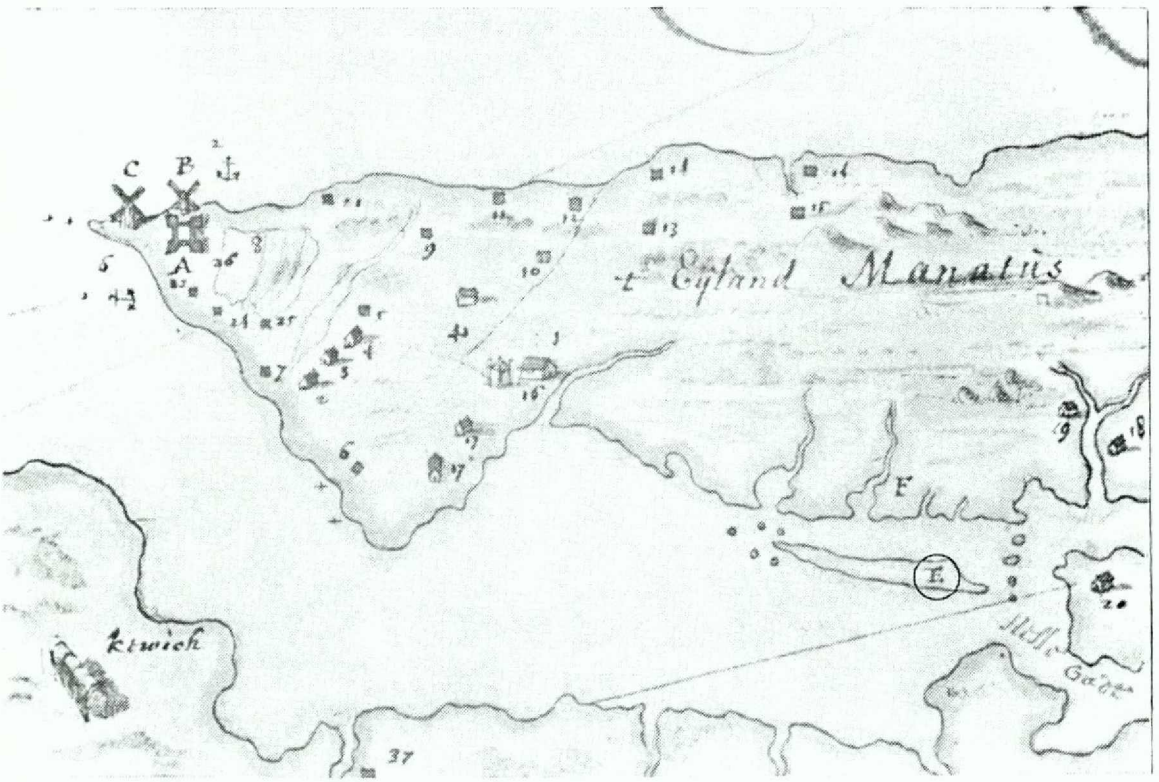


Plate 13. Detail from a facsimile of the 1639 "Manatus" map, one of the earliest maps of Manhattan and its settlement. "E" (circled) is now Roosevelt Island, and while the Dutch fort, windmills, farms, or bouweries, and houses are shown in the southern part of Manhattan, no settlement is documented on the little island (note the Indian lodge in the lower left hand corner in what is now Brooklyn) (1981 Library of Congress facsimile from the Map Division of the NYPL)

to its shape which, with its steeply sloping sides and rounded center, may have reminded the Dutch settlers of a pig's back.

Its second owner was John Manning, an Englishman who acquired the island in 1667, three years after the English gained control of Nieuw Amsterdam. Manning was instrumental in briefly returning New York to the Dutch in 1673, bringing disgrace to himself and either self-imposed or official banishment to his island as a punishment (Wilson 1892:371-372; Lamb quoted in Wilson 1892:372 footnote 1). He appears to have been the first settler on the island.

After his death, Manning's stepdaughter, Mary, and her husband, Robert Blackwell, lived on the island, giving it their name. With the exception of a brief hiatus in 1823, members of the Blackwell family continued to live there until its sale to the city in 1828. Sometime around 1795, the Blackwell House, now restored as an historic property and situated south of the North-town I development (see Figure 3), was built.

Toward the end of the Revolutionary War, the island was proposed as a place where sick and wounded prisoners, many of whom were kept on ships, could be taken for the day during the summer months (David 1968:16). Soon after the War, an attempt was made to sell the island. It was described in an advertise-ment as a healthy place to live, with two small dwelling houses, a barn, bake and fowl houses, a cider mill, a large orchard with a vast variety of trees, running streams (most of them with good water), and cleared stone quarries (Stokes V 1926:1187). But there was no buyer, and the Blackwells continued to own the

island until 1823 when it was bought by James Bell; however, at Bell's death in 1825, it reverted back to the Blackwell family through a mortgage foreclosure (Stokes V 1926:1678). It remained in their hands until three years later when the City bought it for $32,500 (Liber 239:287-289) with the intention of building a penitentiary and creating an island of correctional and charitable institutions. (Twenty years later, an additional $20,000 was paid to Bell's widow to settle a claim.)

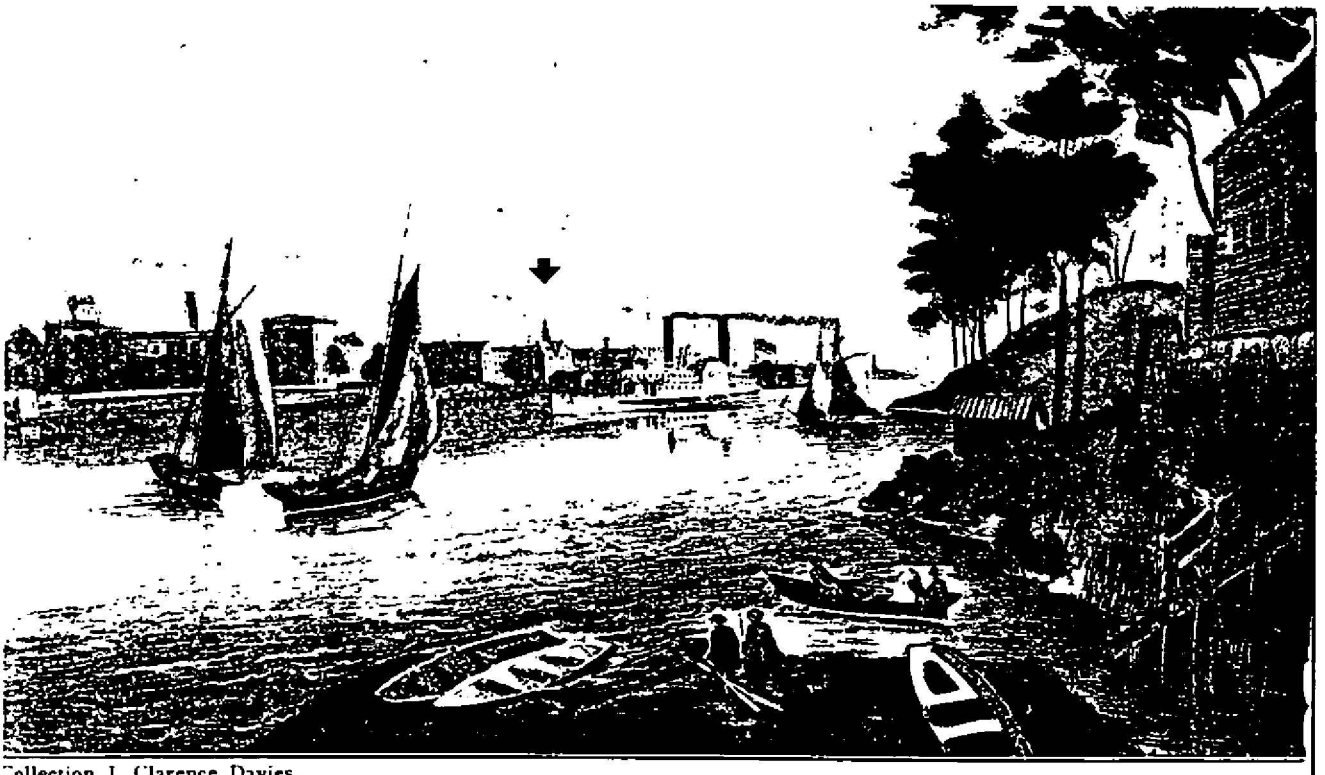
Mainly Feudal in aspect, the institutions that were built on the island in the nineteenth century were designed or architecturally supervised by renowned architects. Men like James Renwick, Jr., who was selected as the supervising architect for the Commission of Charities and Correction, were among the architects involved in the island's development.

Renwick was one of New York's most prestigious architects, with his credits including New York City's Grace Church and St. Patrick's Cathedral (AKRF 1985:60). He is believed to have designed or supervised two landmark buildings on the island: the Smallpox Hospital, built between 1854 and 1856, that stands at the southern tip, and the City, or Charity, Hospital just to the north that was under construction from 1858-1870 (AKRF 1985:60, 63; NYC Landmarks Preservation Commission 1976). He was also the supervising architect when the lighthouse at the northern end of the island was built in 1870, but it appears that this structure was at least partially designed and built by an inmate of the Lunatic Asylum (AKRF 1985:68-69).

A. J. Davis, another noted architect, was responsible for the original plan of the Lunatic Asylum built in 1839 and expanded from 1847 to 1848 and again in 1879 (AKRF 1985:66-68; NYC Landmarks Preservation Commission 1976). All that remains of this building located north of the project area is the central Octagon Tower that, unfortunately, was severely damaged by fire in 1982 (NY Times 1982). Among the institutions no longer standing are the Penitentiary, the Almshouse, with its extensive grounds and auxiliary buildings (including the Chapel of the Good Shepherd which is now a restored landmark on Main Street) located just south of the project area, and the Metropolitan Hospital, built in the 1890s, just north of it.

Of major concern here is the Workhouse, the short-term correctional institution that extended across the project area from the mid-nineteenth century until 1936 (this will be discussed in detail below). This massive stone building, which undoubtedly would have been considered historically significant had it still been standing, was designed by C. F. Anderson and its cornerstone was laid on November 2, 1850 (Evening Post 1850). Its site was such that it contributed to the austere aspect of the island and presented an impressive face to the inhabitants of Manhattan (Plate 14).

Although nineteenth-century guidebooks describe the island as "attractive" (e.g., Miller 1866:39), and although not all its buildings were penal institutions, the reputation and Feudal aspect of the island caused its name to be associated with foreboding and evil. In 1921, at least in part to dispel this connotation, it was renamed Welfare Island (Bailey 1974).



Collection J. Clarence Davies.

EAST RIVER AND BLACKWELL'S ISLAND, 1850. BOAT LANDING AT FIFTY-EIGHTH STREET. MRS. W. K. VANDERBILT, MISS ANNE MORGAN, MISS ELISABETH MARBURY ARE INTERESTED IN THE REVIVAL OF THIS SECTION AS A FINE RESIDENTIAL NEIGHBORHOOD. KNOWN AS SUTTON PLACE.

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EAST RIVER AND BLACKWELL'S ISLAND, 1850. BOAT LANDING AT FIFTY-EIGHTH STREET. MRS. W. K. VANDERBILT, MISS ANNE MORGAN, MISS ELISABETH MARBURY ARE INTERESTED IN THE REVIVAL OF THIS SECTION AS A FINE RESIDENTIAL NEIGHBORHOOD. KNOWN AS SUTTON PLACE.

Plate 14. Currier & Ives lithograph showing Blackwell's Island from 86th Street in Manhattan in 1863. The caption accompanying the print, which came from Brown 1923:opp. p. 158, is full of misinformation (e.g., Weaver 1925:52). Note the Lunatic Asylum with its Octagonal tower to the left and the Workhouse with its steeple to the right center (arrow)

Throughout its use as a center of charity and correction, access to the island was controlled. The swift currents of the East River made escape, or "elopement" as it was called in the nineteenth century, difficult. However, boats and ferries ran from various points in Manhattan, among them the foot of east 26th and 78th Streets, and by 1909, the Queensboro Bridge provided limited access (WPA 1939:212). Today, the island can be reached by a bridge from Queens or a tramway from Manhattan, and a subway has been under construction for years.

Once the old institutions began to relocate to more modern facilities, the island's aspect became desolate (this must have been dispelled somewhat by the construction of two city hospitals, the Goldwater Memorial Hospital in 1939 and the Bird S. Coller Hospital in 1952). In the late 1960s, when all of the nineteenth-century institutions had been relocated and their buildings either demolished or abandoned, the city initiated redevelopment of the island (NY Times 1966). Residential and commercial units were planned as was the upgrading of the two city hospitals remaining on the island.

By 1969, the State Urban Development Corporation (UDC) had joined the redevelopment program and had acquired a 99 year lease from the city (NY Times 1969). The architectural firm of Johnson & Burgee presented a master plan that called for development in stages, of which Northtown I, south of the project area, is part (Johnson & Burgee 1969). This construction brought apartments, commercial space, classrooms, and parking facilities to the island. Once again, in 1973, its name was changed, and it became Franklin Delano Roosevelt Island.

In 1977, the Starrett Housing Development Corporation, a private developer, began discussions with the UDC about developing a 9.3 acre site, and Northtown II represents their current development plan (for a more complete discussion of the island's recent development history, see AKRF 1985:S-1 - S-5).

The Workhouse

For approximately eighty-five years, until 1936, the project area was the site of the massive stone Workhouse that faced Manhattan between 72nd and 75th Streets. Intended as a correctional institution for short-term offenders such as drunks, vagrants, and the disorderly, its construction was hailed as beginning "a new era in the history of prison discipline in this country" (Evening Post 1850). It was expected that all who were able would work and contribute to his or her own support as well as provide income for the city. However, this concept was never fully successful, and became less so over time (e.g., Miller 1866:39; Richmond 1871:542).

Although the building was demolished almost fifty years ago, a great deal of information is available that documents its location, suggests its construction history, records what it looked like, and describes prevailing conditions. For example, at least two nineteenth-century maps show the building's location (Viele 1874; Bromley and Robinson 1879; Plates 15-17 this report) and an 1895 tax assessment map indicates its plan (Figure 5).

Contemporary accounts reveal that the finished product deviated from its original design. According to a newspaper article commemorating the laying of the cornerstone in 1850, the

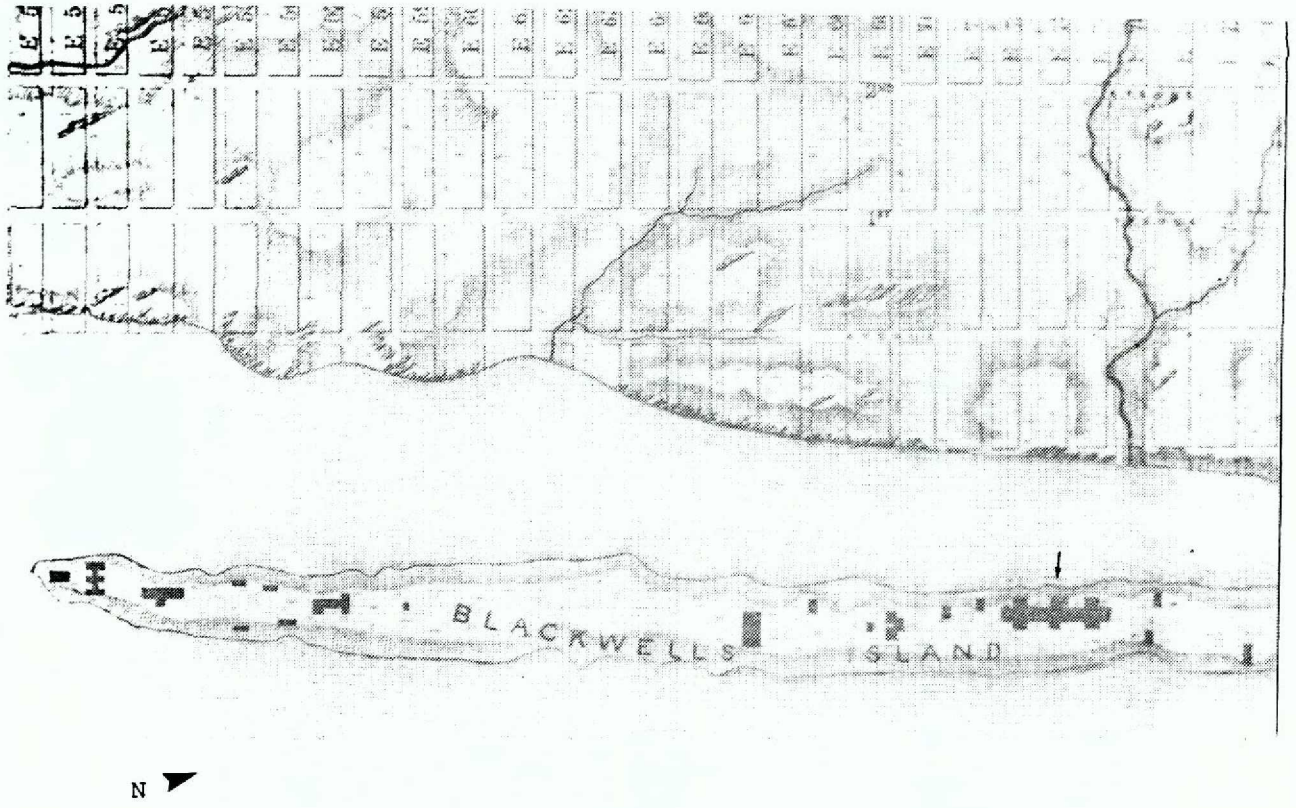


Plate 15. Detail of 1874 topographic map of Blackwell's Island (the Workhouse is indicated by an arrow). Note the steep slope that surrounds the island and the consistency of the general terrain (Viele 1874, Map Division of the NYPL)

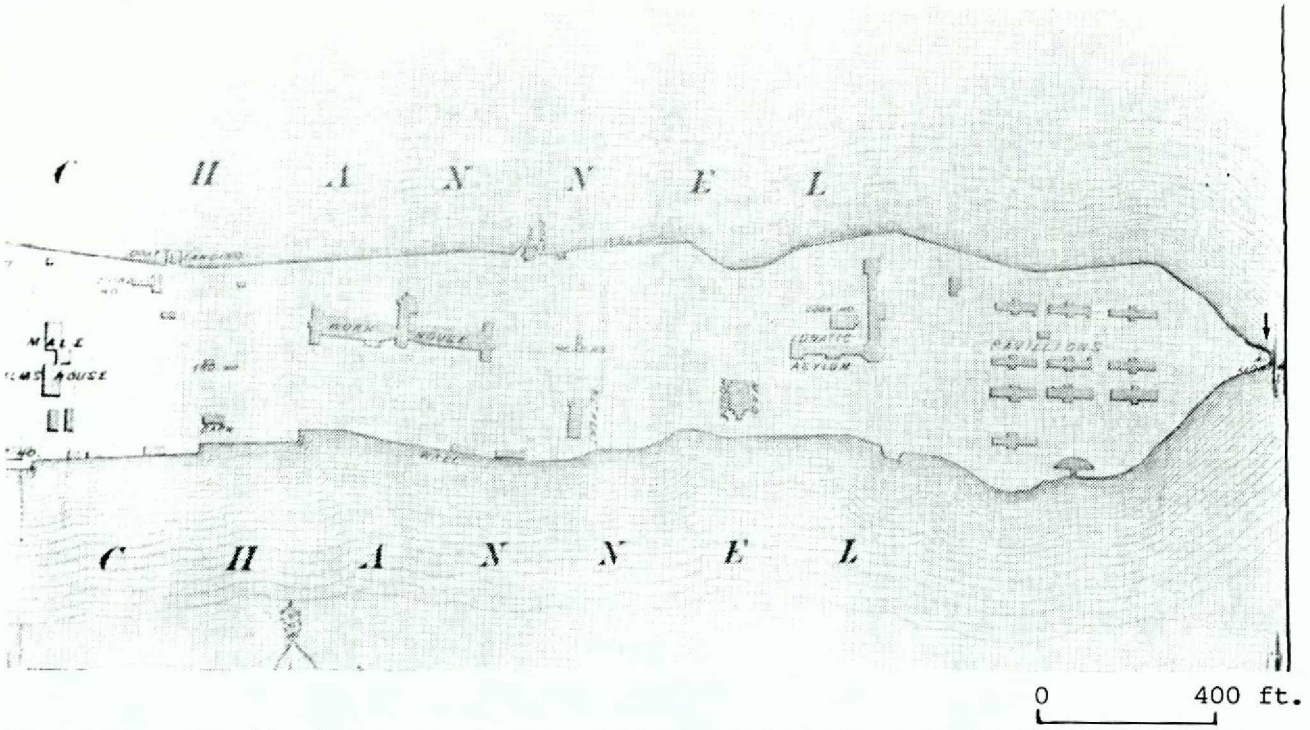


Plate 16. Detail of the north end of Blackwell's Island in 1879. Note lighthouse (arrow) at end of the island. The Workhouse is seen in relation to the Male Almshouse to the south and the Lunatic Asylum to the north (Bromley and Robinson 1879:Plate 41, Map Division of the NYPL)

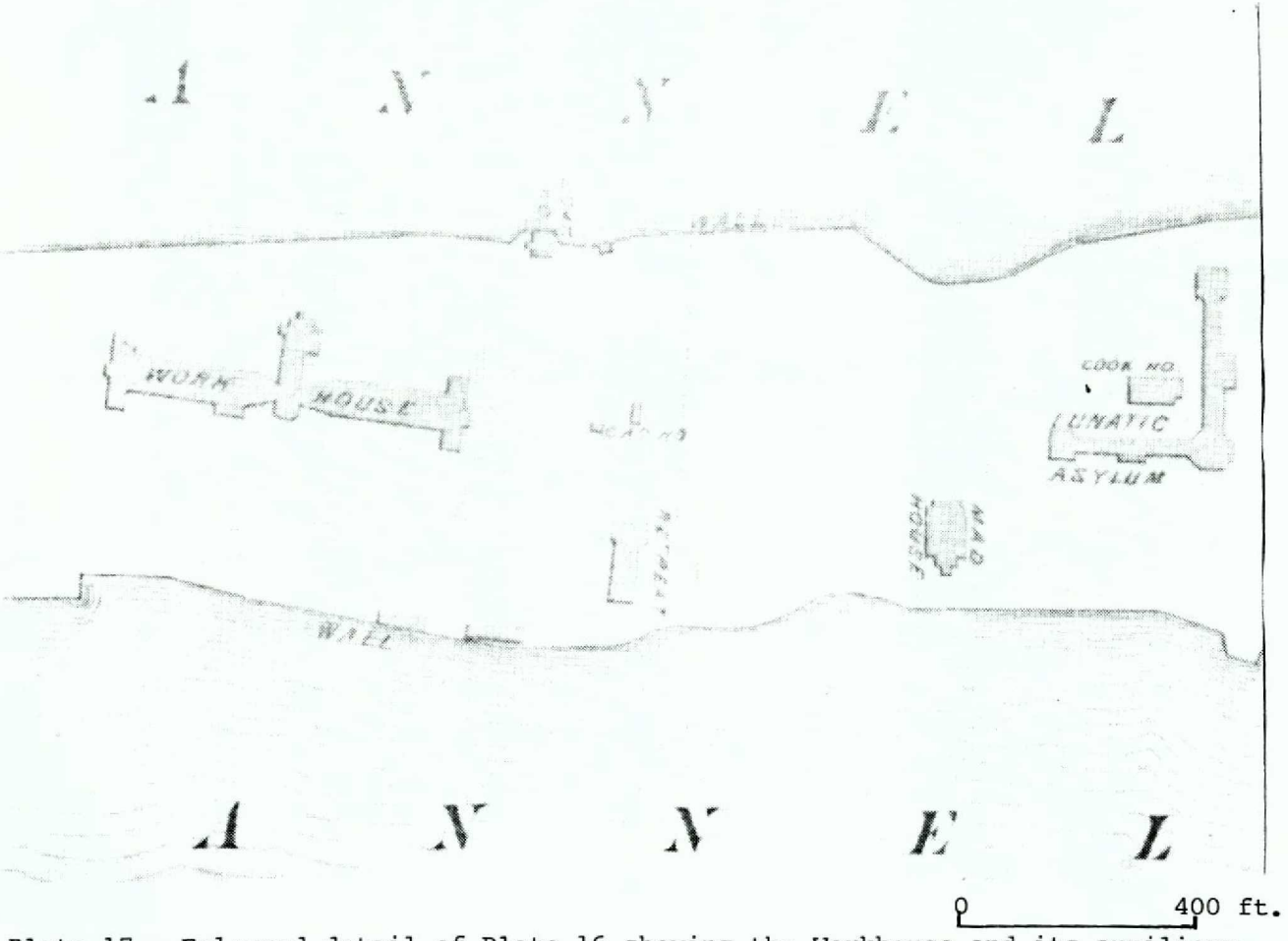
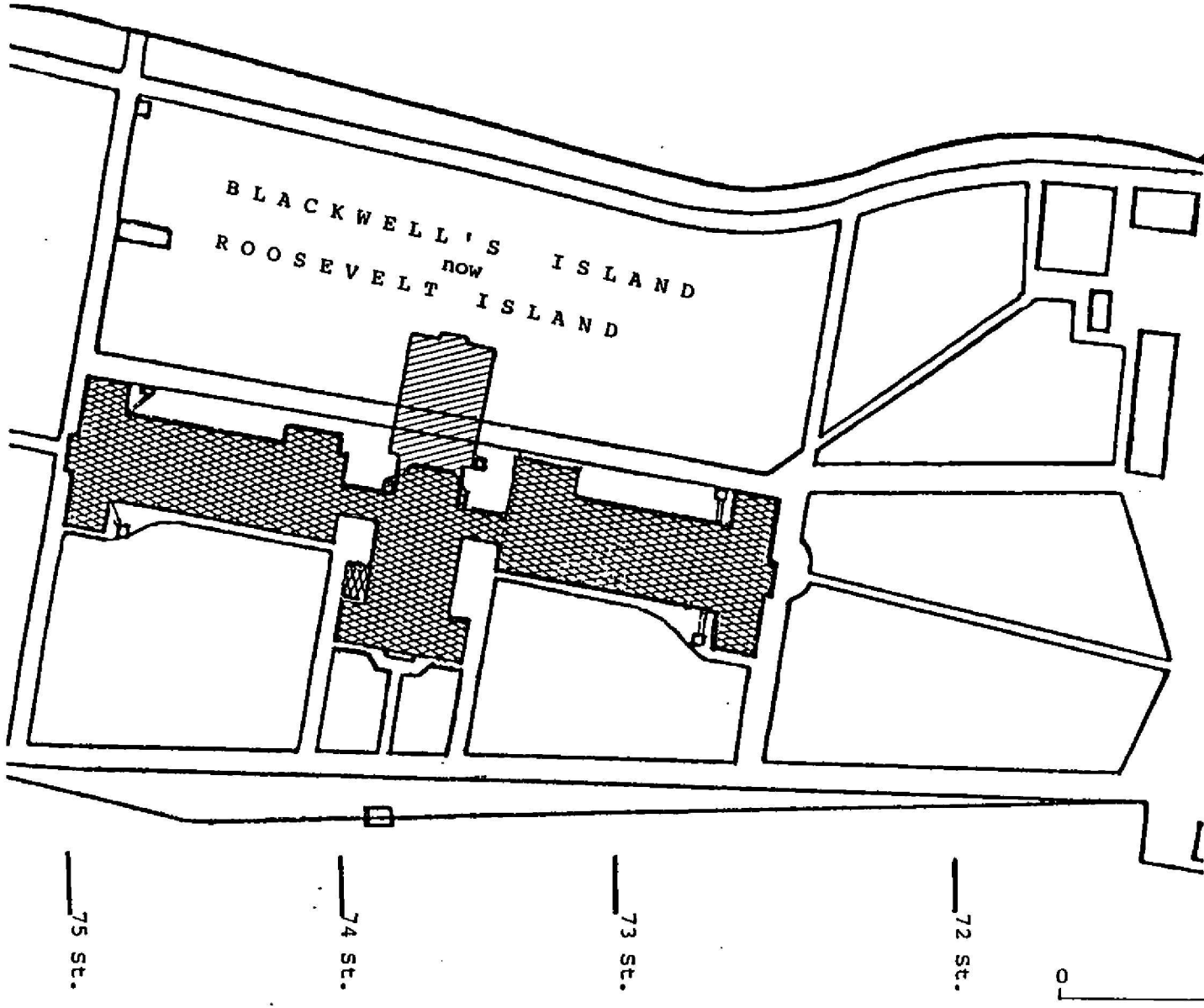


Plate 17. Enlarged detail of Plate 16 showing the Workhouse and its auxiliary buildings (boat house, retreat, CAS (?))



1895 Workhouse Plan Post-1895 Workhouse Addition (?) Note: mid-lines of four Manhattan streets are shown for reference

Figure 5. NORTHTOWN PHASE II: Workhouse Plan--detail (modified detail of Figure 4)

building was meant to have four wings radiating from a central hub (this was a concept that may have resembled the design of the Lunatic Asylum located north of the site). Planned to be 750 ft. long, its four wings were to house 600 four-person cells situated along tiered corridors. The central building was to contain the kitchen, sculleries, storerooms, matron's apartment, and chapel, while the laundries and drying and mangle rooms were to be situated in the two wings intended for female inmates (Evening Post 1850). Although the central portion of the building apparently was built according to plan (Harris 1936), the wings were not. Only two wings, both of them T-shaped, ultimately radiated from the central building; the north wing was for females, the south for males (see Plate 9).

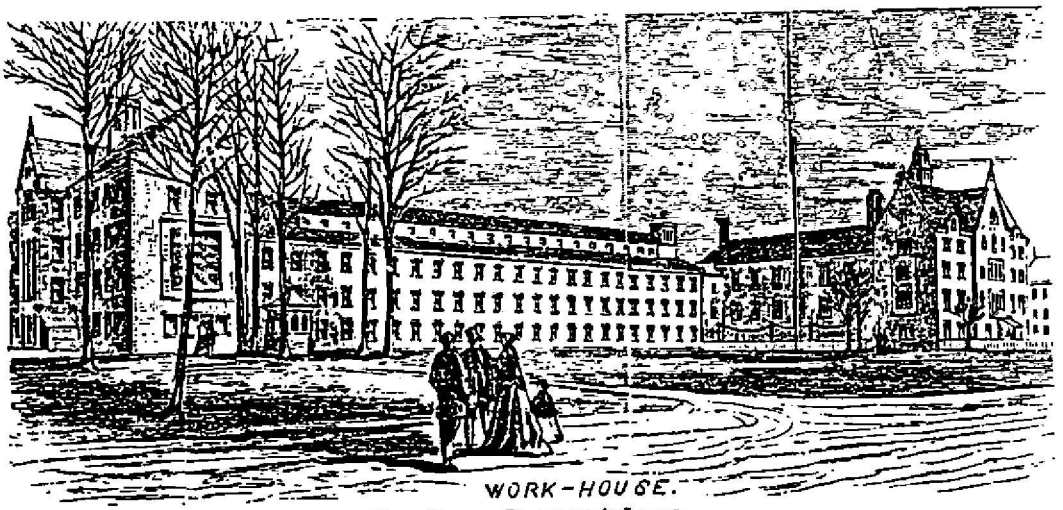
It is possible that the building was constructed piecemeal since, in 1866, it was described as being merely 325 ft. long (Miller 1866:39), suggesting that only the central building was completed. However, annual reports from the 1860s do not mention construction, and an 1863 lithograph (see Plate 14) shows a complete building, so it is possible that the "325" may be simply a typographic error. By 1871 its length was given as 680 ft. (Richmond 1871:542), apparently indicating that by then at least it was a finished structure. (It should be noted that the 680 ft. recorded in 1871 does not agree with the "about 600" ft. noted in 1894 [King 1984:492] or the approximately 630 ft. drawn to scale on the 1895 tax map [see Figure 5]).

The tax map indicates that sometime after 1895, an addition was made to the central building. This may have been part

of the renovations needed after fire badly damaged it on March 17, 1917 (Harris 1936:80; NY Times 1917). This fire, apparently caused by faulty wiring in the chapel where a Jewish service had just ended, was one of two episodes of major damage, but no loss of life, recorded for the Workhouse. The other occurred when the storehouse of a munitions factory located at 78th Street and the East River exploded in 1863. Nearby buildings were demolished, and, as was the case at the Workhouse, windows and furniture were broken and plaster and roofs were damaged for miles around (CPCCAR 1863:86-87;NY Times 1863).

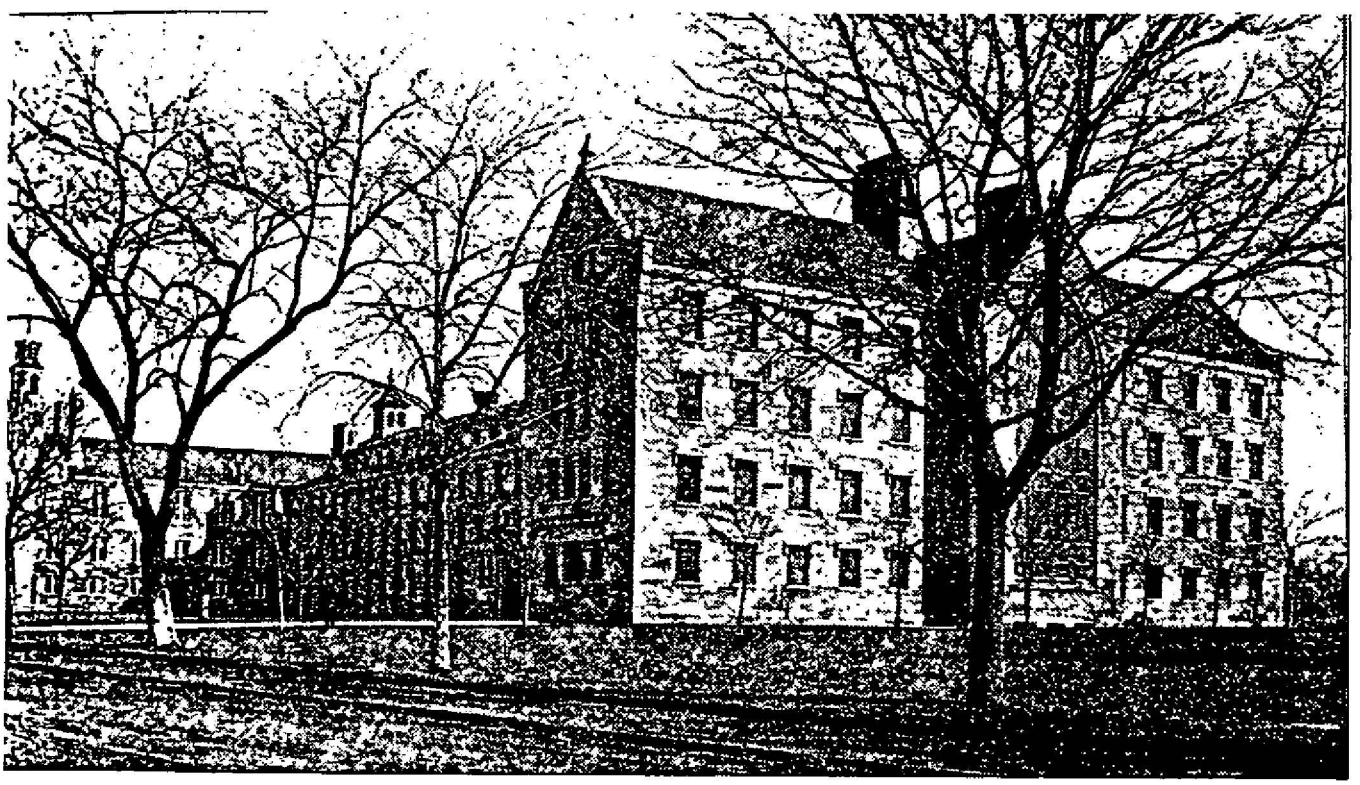
Beginning in 1871, the building's appearance is well documented: An engraving shows the north wing and the north side of the central building (Plate 18); a photograph published in 1894 illustrates the south wing and part of the south side of the central building (Plate 19); yet another from the 1890s shows the south wing from the rear and a guard house behind the building (Plate 20). In all these pictures the Workhouse is surrounded by well-kept lawns, indicating that what once had been "exceedingly broken", rocky, ground was then tended and smooth (Richmond 1871: 542).

Although the building's exterior did not fully follow the architect's original scope or scheme, the interior apparently was faithfully executed. Three floors of narrow, tiered corridors with low railings--the bane of a superintendent's existence in an atmosphere as volatile as a correction institution (Harris 1936:58)--surrounded an open central hall (Plate 21).



WORK HOUSE.—BLACKWELL'S ISLAND.

Plate 18. 1871 engraving of the north wing of the Workhouse and part of the central building (compare with much higher central building in Plate 9). Note guardhouse near the crosswing and neat but barren appearance of the grounds (Richmond 1871:opp. p. 535)



WORK-HOUSE, BLACKWELL'S ISLAND.

Plate 19. Photo of Workhouse ca. 1894. Front and side view of the southern wing are shown as is the southern side of the central building, and a guard-house (arrow) is barely visible. Again, note tended, smooth lawns (King 1894:498)

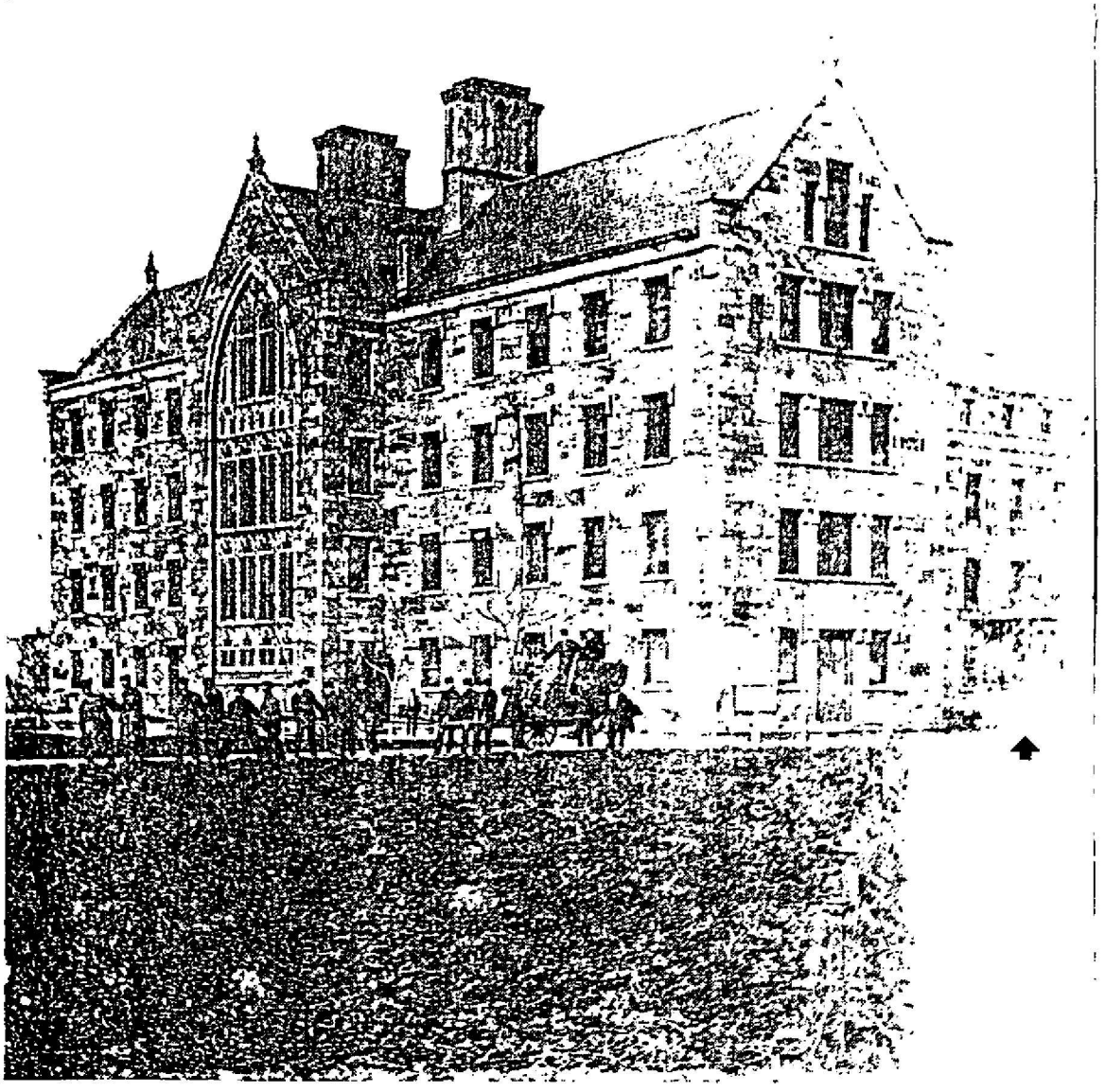


Plate 20. View of the north crosswing of the Workhouse and part of the rear of the building with yet another guardhouse (arrow) visible. The back of the building seems to have the same neat, barren appearance as the front and sides (Photocopy of a Jacob Riess photo, ca. 1890, Museum of the City of New York)

CELL BLOCK, WOMEN'S WORKHOUSE

Plate 21. *Interior view of the Women's Workhouse* (the north wing of the building). The date of the photo is unknown, but is probably around 1936, the year it was published. Note the open corridoors with low railings that surround the main hall (Harris 1936:opp. p. 48)

As can be seen, the information from available maps, photos, and prints is fairly extensive (the only major gap concerns the back of the building). Equally revealing is documentation that includes thirteen annual reports from the Board of Commissioners of Public Charities and Correction published between 1860 and 1879. From an early-twentieth-century perspective the personal account of Mary Harris, the superintendent of the female Workhouse from 1914 to 1917, is equally important. On different levels, all reveal aspects of life in the institution as well as the concerns of its overseers.

In the nineteenth century, the inmates not only produced clothing and daily utensils for all the city's institutions (Table 1), they also made coffins and shrouds, grew vegetables, tended the grounds, built seawalls, quarried stone, and made roof and other structural repairs and improvements. Between 1860 and 1879, they also filled contracts for items such as caps, stockings, "segars", and hoop skirts, but by the beginning of the twentieth century it appears that much of this activity had stopped (see Harris 1936).

An inevitable division of labor occurred between men and women, and one outcome was that men did outdoor work while women, who mainly sewed and cleaned, were confined indoors. In looking back at her tenure at the Workhouse, Mary Harris lamented the fact that often women were outdoors only when they were on the "bucket brigade", apparently emptying the soil buckets from the cells. Moreover, not only were they indoors, but they were locked in their cells immediately after supper (about 4:30) until breakfast the next morning (Harris 1936:65, 69).

MANUFACTURED GOODS, STOCK, &c., TURNED INTO STORE DEPARTMENT.

12 pairs men's shoes.
3 " " boots.
48 " " slippers.
6 " " crippled shoes.
187 " women's slippers.
14 " " boots.
Repairing 1,424 pairs shoes for Randall's Island.
" 653½ " Alms House.
" 176 " Penitentiary
" 20 " Bellevue H'l
Made 244 suits clothes for colored orphans
Altering 1,069 soldiers' coats.
Repairing 4,366 pieces clothing, Randall's Island.
90 pairs kersey pants.
4 kersey overcoats.
74 women's dresses.
600 girls' calico dresses for Randall's Island.
300 calico hoods.
396 boys' shirts, white.
306 girls' petticoats.
164 men's caps.
12 " shirts.
10 women's petticoats.
6 " chemises.
169 bed-ticks.
27 shrouds.
Repairing 2,643 pairs stockings for Randall's Island.
39 lbs. cotton yarn.
55 doz. pairs women's stockings,
41½ " " men's socks.
921 large coffins.
536 small "
682 bedstead blocks.
16 feet oak plank.
5 bread boards.
1 wooden leg.
1 gang-plank for steamboat.
31 peels for bake-house.
17 wheelbarrows repaired.
1 bread-tray "
6 new wheelbarrows.
6 tin boilers, large.
1 coffee kettle.
110 dippers.
80 dozen mess-pans.
54 tin pails.
96 sauce-pans.
Repairing tin ware for Bellevue H.
" " Randall's Island.
" " Bake House.
24 dinner dishes, with covers.
24 dish-pans.
60 dozen tin cups.
12 boilers repaired.
1 watering pot.
4 sheets tin.
108 dust-pans.
1 kettle, 25 gallons.
1 " 4 "
144 wash-basins.
16 feet tin leader.
3 kettles, 15 gallons.
1 coffee-pot.
1 potato-strainer.
16 iron spikes,
2,153 quarry tools repaired.
2 bolts and band, for steam pipes.
1 gate-stop and iron braces.
2 iron dogs, with bolts.
4 hooks and 6 links.
Nuts, plates, and hooks for 2 pairs hinges.
23 staples and 8 hooks.
4 pairs hinges repaired.
14 lbs. nails.
93 pairs hinges, with hooks, bolts, and nuts.
1 fire-rake.
Altering bedsteads.
36 rivets and bars.
4 *iron plates.*
2 raisers and screws.
2 slice bars.
1 pump-handle.
6 iron rods.
30 harrow pins.
1 truck axle.
Blacksmith's jobbing for new Lunatic Asylum.
4 crow-bars.
Repairing quarry tools.
" iron work for steamboat
2 pairs ice-hooks.
1 furnace rake.
1 hammer.
16 horse-shoes.
3 iron hold-fasts.
1¼ bushel coal.
7 squares glass.
158 lbs. crackers.
109 " tarred rope.
220½ yards gingham.
1 barrel white sand.
3 " grease, 826 lbs.

HOUSE OF GOOD SHEPHERD.

79 dress skirts.
30 pillow-cases.
7 sheets.
12 chemises.

ARTICLES MANUFACTURED AND RETAINED FOR OWN USE.

5 pairs women's boots.
1,564 " women's slippers.
301 " men's shoes.
4 " " slippers.
4 " " footed boots.
2 leather belts.
33 men's vests.
82 pairs men's kersey pants.
134 kersey jackets.
11 kersey overcoats.
197 pairs kersey mittens.
983 women's dresses.
84 flannel shirts.
630 shirts.
303 hoods.
39 shrouds.
89 aprons.
4 coffee bags.
1,105 chemises.
11 bed ticks.
621 petticoats.
16 window curtains.
144½ doz. pairs women's stockings.
78 doz. pairs men's socks.
17 coal hods.
2 tea kettles.
2 soup ladles.
11 saucepans.
73 doz. mess pans.
4 skimmers.
12 pie dishes.
9 boilers.
18 soup turreens.
24 tin pans.
30 tin dippers.
1 garden syringe.
17 feet tin leader.
2 tea pots.
11 tin pails.
12 tin meat pans.
4 doz. tin cups.
2 chamber pails.
2 cullenders.
12 tin plates.
24 dust pans.
2 coffee pots.
6 grate pans.
1 chimney pot.
8 fire shovels.
6 wash-basins.
23 cot bottoms.

GARDENER'S REPORT OF QUANTITY AND KIND OF VEGETABLES RAISED.

15,000 head of cabbage.
1,000 " celery.
700 bushels of potatoes.
170 " beets.
250 " carrots.
220 " turnips.
100 " tomatoes.
100 squashes.
100 bushels onions.
4 " peppers.
4 " egg plants.
3,000 heads salad.
20 bushels Lima beans.
10 " peas.
Large quantity of parsley.

Table 1. NORTHTOWN PHASE II: Articles Manufactured and Food Grown by the Workhouse Inmates in 1863 (CPCCAR 1863:88-89)

The fact that a bucket brigade was active in the second decade of the twentieth century raises the question of sanitation and water facilities, both important factors in archaeological investigations. Underground cisterns used for water collection and privies used for waste disposal often function as as archaeological time capsules since, when no longer used, they were usually filled in quickly. However, there is no indication of privy facilities on the Workhouse grounds, and the ritual of the bucket brigade suggests that waste matter was disposed of via some sort of conveyance or possibly in the river. (If it was the river, after 1881, it was in violation of a health ordinance that prohibited using the Hudson or East Rivers for the disposal of privy, sink, and cistern material [BH 1881:31]). Apparently, the Department of Health provided scows and steamers to remove waste collected from privies by "scavengers" (e.g., BH 1874:9); it is possible that boats also removed waste from the island, perhaps avoiding the intermediate privy.

If privies were used, undoubtedly they would have been located somewhere behind the building, probably a good distance from it. Since thousands of people used the institution yearly, these facilities would have needed to be large. Chances are that if they did exist, they were near or east of the island's current Main Street, but this is purely speculation, and no maps appear to document such facilities.

Less speculative is the source of the island's water supply. Several of the annual reports mentioned earlier note that at least by 1860, two pipes running under the East River

from Manhattan supplied water from the Croton Water system. They also mention a reservoir that is documented on the Bromley and Robinson map of 1879 shown in Plates 16 and 17, but south of the illustrated sections.

Since John Fitch, the Workhouse superintendent at least from 1860 to 1866 and perhaps before, was responsible for the repair of the two water pipes that ran under the East River from 70th and 79th Streets, their care and maintenance are recorded during these years. He also expressed concern about their adequacy to serve the island's many institutions (CPCCAR 1862-1866).

Only 2 1/2 in. in diameter, these pipes were constantly "chafed" and required cleaning. Moreover, at least once each year from 1860 to 1866, Fitch records that one or both of the pipes were broken, usually by ships raising anchor. Once, the 70th Street pipe was so badly damaged that 29 1/2 ft. had to be removed for repair, a very expensive proposition (CPCCAR 1863: 86). Given these water-supply problems, it is possible that some sort of auxiliary system, perhaps collection in cisterns, was used, but again this is speculation. Whatever the problems, it appears that water was available to expand the steam heating system to all cells in 1860 (CPCCAR 1860:181), and to allow water closets to be installed in the Workhouse hospital ward in 1879 (CPCCAR 1879:158).

When and how the water problem finally was solved remains unknown. Either it was resolved by the time a new superintendent was installed in 1867, or it was no longer his concern since the water situation is not mentioned by Fitch's successor.

Instead, this man's energies mainly centered around temperance, punishment, and economizing (CPCCAR 1867-1870). With his tenure, the original concept of the Workhouse apparently was altered and it appears to have become less a place of refuge and industry than a place of punishment.

In addition to the concerns of the superintendents, the documentation available for the Workhouse provides an extensive record that is akin to archaeological data. For example, the annual reports provide information about numbers of inmates, about the clothing and utensils they manufactured and used, and about the kind of food they produced and presumably consumed. This information relates to archaeological interests that often include economic and social issues for which no records exist. Even though records often present the ideal rather than the actual, the data found in the lists of items produced for in-house use (Table 1) can be analyzed much like artifacts recovered from archaeological investigations.

For example, it appears from the number of pairs of women's shoes (5) produced in 1863 compared with the number of slippers (1,564) that women were indoors more than out. Just the opposite seems true of the men whose shoes (301) outnumbered slippers (4). (It is the ratio of shoes to slippers rather than numbers that should be noted since women far outnumbered men in the institution in 1863; this was probably because men who might have been candidates for the Workhouse were involved in the Civil War.) Of course this may reflect many factors, but given the documented difference in male and female occupations, the

slipper-to-shoe relationship seems to be a reflection of a difference in activities. Other articles of clothing manufactured by the inmates--the dresses, chemises, petticoats, and stockings, to name some of the female items--offer clues to the mode of dress in the Workhouse. The amount of clothing produced compared with the number of inmates might suggest attitudes of the authorities toward the inmate's comfort and the role that clothing may have played in their punishment.

Food and diet is often a concern of archaeologists, and the utensils and food-related vessels made and used by the inmates undoubtedly reflect diet just as the broken ceramics and utensils in an archaeological deposit do. The soup ladles and tureens, the meat and mess pans--all suggest diet as well as the mode of serving. Diet is also indicated by the kinds and quantities of vegetables grown. For example, 15,000 heads of cabbage, the most plentiful vegetable produced, compared with the average number of inmates for the year (approximately 732) would provide about one-fifth of a cabbage to every Workhouse inmate each day of the year. However, vegetables were grown by the Workhouse for all the island's institutions, so although the inmates' vegetable diet consisted mainly of cabbage, the actual daily allotment would have been less (see Appendix A for the complete 1863 annual report).

Although it was hailed as a model institution at its inception, over the years the Workhouse became infamous. It was finally vacated on October 11, 1936, and WPA workers quickly demolished the building just as they had demolished the peniten-

tiary that same year. "Thus ended the long and inglorious history of [an institution] whose abandonment and demolition had been urged by civic organizations for decades" (MacCormick 1937:1).

No records have been located that describe the means of demolition, but it is possible that a wreckers' ball and chain was used to level the building (Friedman 1985:personal communication). Then too, one can only speculate about where the building debris was taken. Perhaps part of it has been used as fill to create the twenty-odd acres that the island has amassed between 1894 and now. Then too, it could have been deposited south of the current development where subsurface testing indicates an extensive deposit of boulders, brick, and wood (see Test Boring Data below).

A few years before the Workhouse was demolished its inmates were moved to Riker's Island, and, by 1934, it became the medical center for the Department of Correction. Renamed Correction Hospital, at the time of its abandonment it apparently was well thought of and was staffed by qualified professionals drawn mainly from the ranks of the WPA (MacCormick 1937:1-2).

Site History Since 1937

During the clearing of the Workhouse site early in 1937, plans already were under way to turn it into a convalescent "park" or camp under the auspices of the Department of Health. Intended primarily for children recovering from Infantile Paralysis or suffering from diabetes and some forms of heart ailment, this facility opened in June, 1939 (NY Times 1937, 1939).

As opposed to the massive Workhouse, eight camp buildings, an administration building, and a storehouse--all one story structures--were distributed neatly across the site (NY Times 1939). In 1962, the New York City Fire Department officially took control of most of the site and its buildings for a Fire Training College (David 1968:17), but it appears that it was either using the property or planning development prior to this time.

In 1960, plans were formulated to renovate the facility. Included were the construction of a five-story training center located out of the project area (east of Main Street) and a fire tower built on what is now a parking lot scheduled to become an extension of the Motorgate parking (Gibbs & Hill 1971a:VI). This tower, demolished in the early 1980s, was the last building of the Fire Training facility to remain on the island (Hinninger 1985:personal communication).

Apparently the Fire Department used the camp buildings with only minor changes: an addition was made to the eastern side of the administration building, and a single-story stone structure, probably a storage facility for the camp, was demolished (the foundation for this building still may exist since it is inventoried on a map of buried foundations [Gibbs & Hill 1971a:VI]). When the facility was abandoned, two camp buildings, the administration building and a dormitory, still remained and a decorative pool located in front of the administration building may also have been a camp feature. What remains today is the concrete floor of the administration building and two flagpoles that flanked its front approach (see Plates 6 and 7).

The project site has been abandoned since the Fire Training College was moved to Randall's Island in 1977 (Checco 1985:personal communication). Now, gardens cultivated by the island's residents cluster south of the demolished administration building, many of them defined by large rocks that may be debris from the Workhouse or other razed buildings (Plates 22 and 23).

EVALUATION

The Workhouse Foundation

As discussed earlier, the construction history of the Workhouse, which included removing 1000 cubic yards of rock to build the south wing as well as modifying the building's rocky grounds to create tended lawns, undoubtedly would have destroyed any prehistoric deposits that might have been located on the site. Then too, the upheaval caused by the demolition of the building nearly fifty years ago and subsequent construction undoubtedly have destroyed any nearby features or buildings, such as cisterns and privies or workshops and storehouses, that might have been associated with it. What should remain, however, is evidence of the foundation that extended across the project site.

It is surprising, then, that an extensive inventory of the island's buried foundations does not document it (Gibbs & Hill 1971a:VI) since it is highly likely that all or part of this foundation still will be intact. However, by juxtaposing the plan found on an 1895 tax assessment map with a plan of the current development, it is possible to reconstruct its general location (Figure 6).

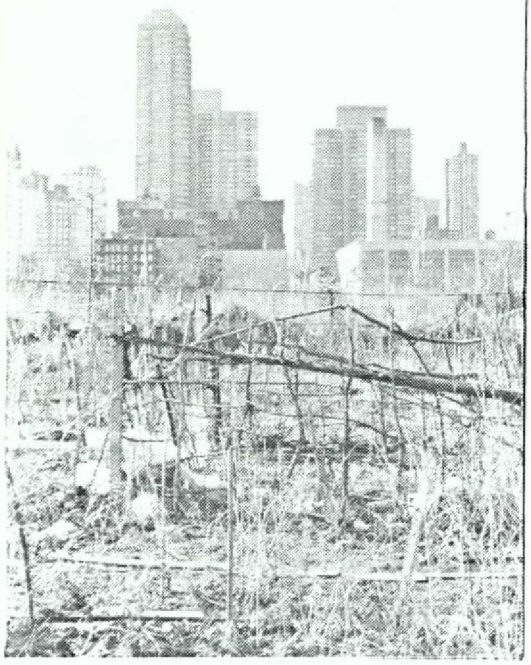


Plate 22. Community garden outlined in rocks (see also Plate 7). View looking west from central path that runs through the gardens. Manhattan buildings are in the rear (photo: March, 1985)

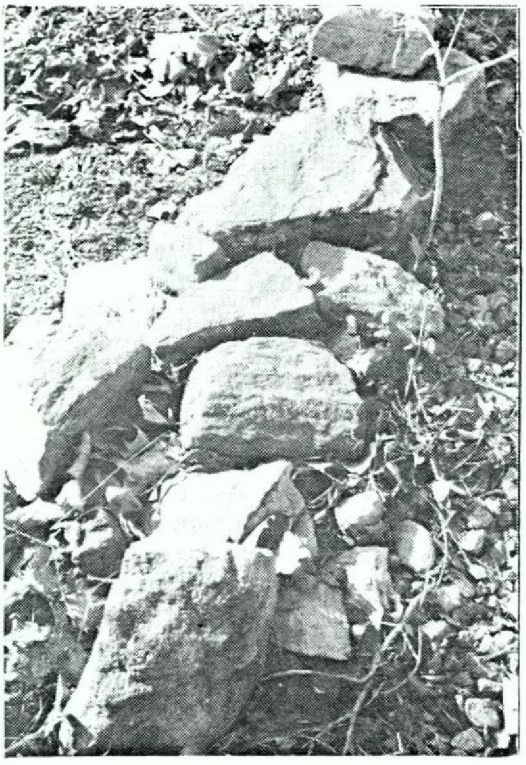


Plate 23. Detail of rock wall in garden. Note that the rocks do not appear to be dressed although if they did come from a demolished building such as the Workhouse they would have been broken during the razing of the building (photo: March, 1985)

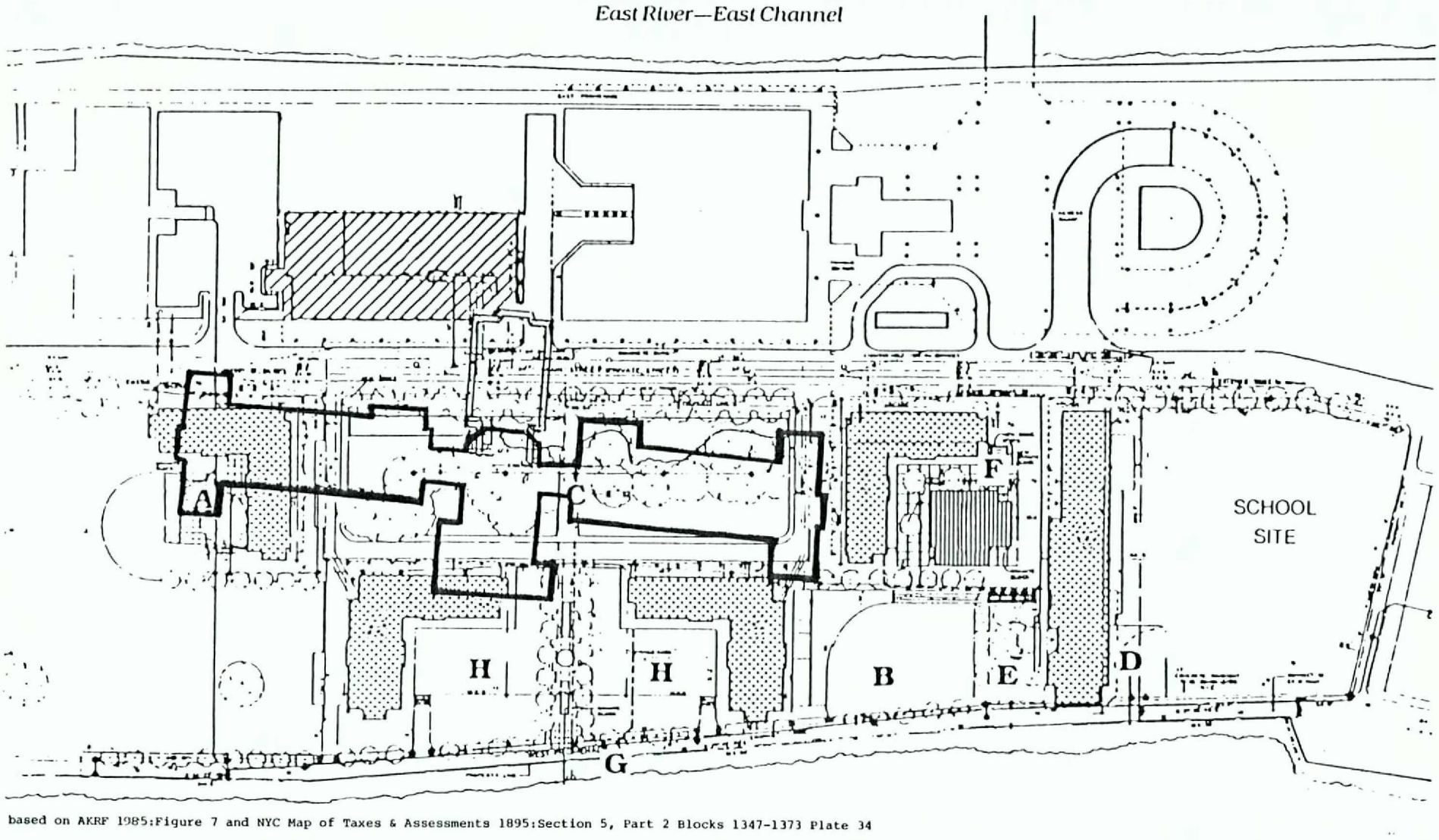


Figure 6. NORTHTOWN PHASE II: Workhouse Foundation in Relation to Proposed Development

This reconstruction suggests that most of the Workhouse foundation should lie within the limits of a large landscaped plaza planned for the site. Graded subsurface exploration in this area should reveal boulders and other evidence for it just as excavation for a water tunnel just north of the project area has suggested that another undocumented foundation (probably that of the late-nineteenth-century Metropolitan Hospital) is located on that site (Greenberg 1985:personal communication).

Test Boring Data

Since 1950, three series of test borings have been drilled that provide information about subsurface conditions within the project area. Of these, the data from thirty borings are available that are relevant to what is believed to be the location of the Workhouse foundation; however, since a landscaped plaza is planned for much of this area, a good part of it has not been tested (Figure 7).

The test borings indicate that fill containing boulders is found in the general vicinity of the north, west, and south sides of the Workhouse site, while adjacent test locations produced mainly sand and cinder fill (Table 2). Moreover, this fill is deposited directly on bedrock which may indicate blasting of the natural soil deposits in this area. This can be compared with the area south of the current development, now a field and a baseball diamond, where an extensive deposit of fill comprising boulders, brick, wood, and some concrete is documented (Gibbs & Hill 1971b:A.31-B6; see Plate 10 this report). This extensive deposit of debris-laden fill is located in what appears to be a deep natural depression since levels of glacial till remain

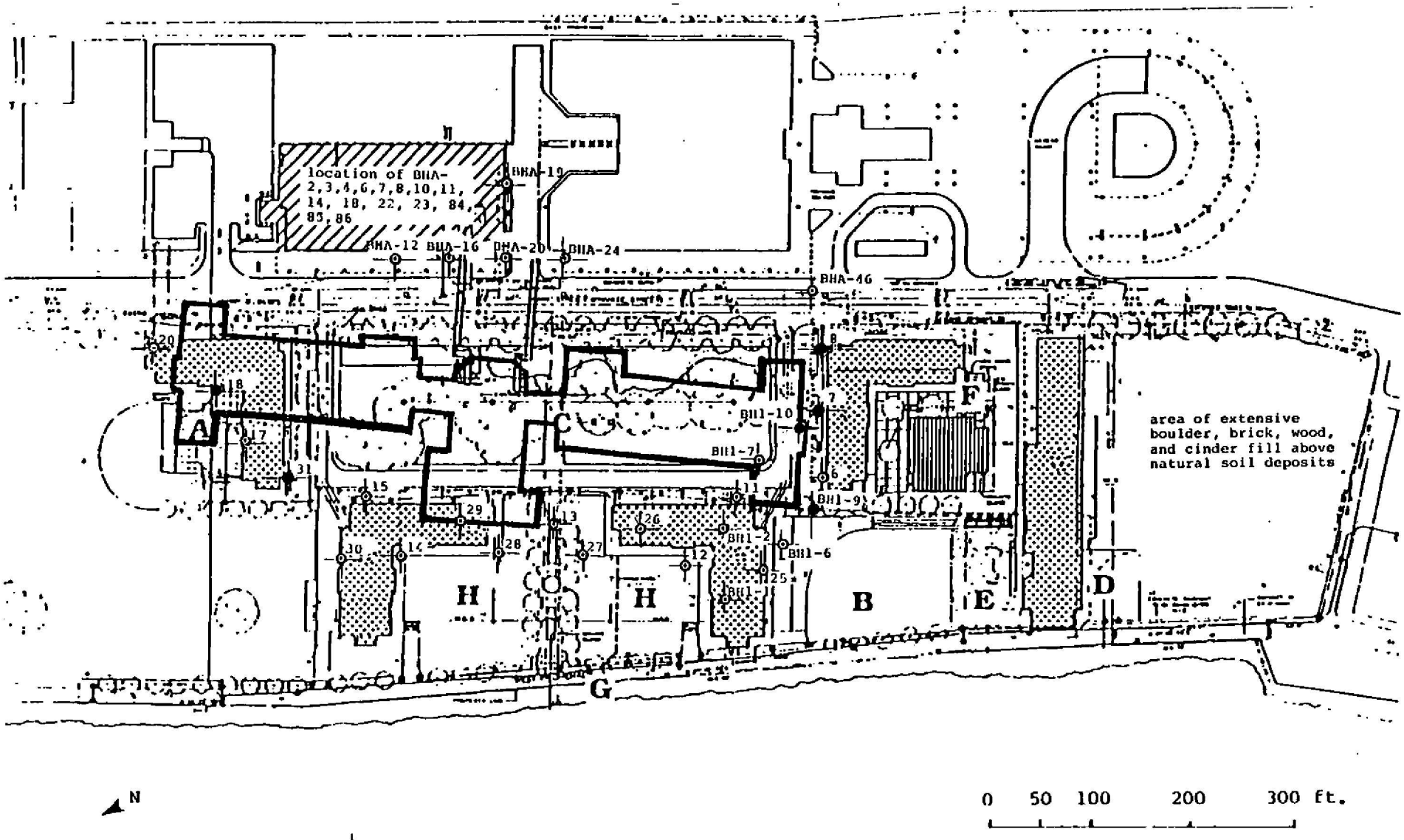


Figure 7. NORTHTOWN PHASE II: Location of Test Borings Relevant to the Site of the Workhouse Foundation (based on Figures 2 and 6, this report, and Test Boring Data provided by the Starrett Housing Development Corp. re Northtown Phase II:Maps A.26, A.27. B2, A.30 B5, A.28 B3, and A.29 B4.) Note: test boring 25* contained boulders but in a non-fill context

Table 2. NORTHTOWN PHASE II: Test Borings Relevant to the Workhouse Foundation

Boring Number	Rock Elevation*	Ground Elevation*	Description**
Test Borings Relevant to the Workhouse Foundation			
✓18	+6.0	+15	6 in. blacktop 3 ft. 7in. fill, boulders, sand, decomposed rock
20	+5.0	+14.9	4 ft. undescribed fill 8 ft. 9 in. med. br. sand, trace gravel, boulders
29	+1.5	+15.2	3 ft. 6 in. undescribed fill 6 ft. 6 in. (?) sand
13	-1.5	+13.8	6 in. blacktop 11 ft. 6 in. fill: cinders, wood, sand
28	-2.0	+14.5	3 ft. undescribed fill 6 ft. 6.in. fine br. sand 6 ft. red br. sand, little gravel
11	+10.0	+14.9	5 ft. med. fine br. sand, gravel
BH1-7	+7.0	+14,4	5 ft. misc. fill: sand, cinders
✓BH1-9	-7.0	+13.6	4 ft. misc. fill: sand, boulders
6	+9.0	+13.7	4 ft. med. coarse gray sand and gravel; possible fill
✓7	+2.0	+14.3	5 ft. fill: cinders, boulders 7 ft. 6 in. med. fine sand, gravel, boulders, cobbles
✓BH1-10	-1.0	+13.3	7 ft. sand, cinders, boulders
✓8	+4.5	+16.5	7 ft. sand, cinders, boulders
BHA-46	-3.0	+14.4	4 ft. misc. fill 5 ft. layers of fine br. silty sand and layers of br. silt 4 ft. same as above with cobbles and rock fragments
BHA-24	-7.0	+14.0	10 in. crushed stone 15 ft. fine br. sand, gravel, silt, clay
BHA-20	-4.0	+14.3	8 in. asphalt 15 ft. 10 in. fine to med. br. sand and gravel
BHA-16	+8.0	+14.6	1 ft. (?) black top and stone 10 ft. undescribed fill
BHA-12	-2.0	+14.6	1 ft. black top 8 ft. fine br. sand, trace silt and clay
BHA-19	+4.0	+14.0	5 in. cover (?) 2 ft. 7 in. undescribed fill 4 ft. 6 in. br. sand and gravel

(continues)

Table 2. NORTHTOWN PHASE II: Test Borings Relevant to the Workhouse Foundation (continued)

Boring Number	Rock Elevation*	Ground Elevation*	Description**
Test Borings Relevant to the Workhouse Foundation (continued)			
17	+6.0	+14.5	3 ft. undescribed fill 3 ft. fine-med. sand, trace silt
✓31	+8.0	+15.2	3 ft. sand, gravel, boulders 2 ft.fine-med. br. sand
15	-2.0	+14.5	4 ft. fill: sand and cinders 4 ft. fine red-br. sand, trace silt, trace gravel
14	-1.0	+15.6	4 ft. sand and cinders 5 ft. fine br. sand, trace silt, trace gravel
27	-5.0	+15.2	2 ft. 6 in. undescribed fill 6 ft. 6 in. med. fine br. sand 7 ft. sand, boulders, cobbles
26	+9.5	+15.2	6 in. concrete 2 ft. 6 in. fill: cinders
12	-10.0	+14.9	6 in. concrete 3 ft. 6 in. fine br. sand, some silt, trace gravel
25	+5.0	+15.6	6 in. top soil 2 ft. 6 in. fill: sand, gravel 2 ft. 6 in. decomposed rock 1 ft. boulders, decomposed rock
BH1-6	+6.0	+14.5	3 ft. misc. fill: sand, cinders
BH1-2	+7.0	15.9	1 ft. 6 in. concrete 2 ft. 6 in. fill: sand, bricks
30	+5.0	+14.4	4 ft. fill: sand, cinders
BH1-1	-3.0	+14.9	4 ft. undescribed fill
Test Borings from Area East of Main Street			
BHA-23	+1.0	+13.2	8 in. asphalt 4 ft. 9 in. fine to med. br. sand and gravel
BHA-4	+7.0	+14.7	4 ft. undescribed fill
BHA-6	+2.0	+12.0	4 ft. cinders, sand, gravel
BHA-7	+6.0	+13.3	5 ft. 3 in. misc. fill
BHA-8	-3.0	+14.4	1 ft. blacktop and crushed stone 9 ft. med. to fine br. sand
BHA-10	+2.0	+12.3	1 ft. blacktop and crushed stone 5 ft. cinders, br. sand, gravel

(continues)

Table 2. NORTHTOWN PHASE II: Test Borings Relevant to the Workhouse Foundation (continued)

Boring Number	Rock Elevation*	Ground Elevation*	Description**
Test Borings from Area East of Main Street (continued)			
BHA-11	+4.0	+14.0	4 in. black top
			4 ft. cinders, br. sand, gravel
BHA-14	+3.0	+12.7	4 in. blacktop
			5 ft. undescribed fill
BHA-18	+5.0	+11.7	4 in. blacktop
			4 ft. undescribed fill
BHA-22	0.0	+1111	4 in. blacktop and stone
			4 ft. undescribed fill
BHA-2	+3.0	+12.0	4 ft. br. and gray sand, gravel, cinders
BHA-84	+3.0	+12.3	4 ft. 9 in. med. br. sand, gravel, silt, cinders
BHA-85	+7.0	+14.2	4 ft. undescribed fill
Bha-86	+5.0	+14.6	5 ft. undescribed fill
BHA-3	+2.0	+13.4	5 ft. undescribed fill
			3 ft. med. fine br. sand, gravel

* Elevations refer to MLW of Belmont Island, which is 2.265 ft. below MSL of Sandy Hook as established by USC&GS

** Test borings are described only to decomposed rock levels (the level preceding or part of bedrock)

Note: boulders and debris such as wood and brick have been underlined for emphasis; however, only six test borings (18, BH1-9, 7, BH1-10, 8, and 31) indicate that the boulders are associated with fill and could possibly be related to the Workhouse foundation. These test borings are marked with a check (✓).

(data are from Northtown Phase II Test Boring Maps A.26, A.27 B2, A.30 B5, A.28 B3, A.29 B4; all these maps were provided by the Starrett Housing Development Corporation

intact beneath the fill. Its extent is perhaps an indication that this area is a repository of the spoil from the demolition of the nineteenth-century Workhouse or Almshouse, or the later convalescent camp and Fire College buildings. Or it may also be related to the construction of Northtown I.

Borings drilled on and east of Main Street document extensive land modification and filling (mainly sand and cinders) that would have destroyed any buildings or features associated with this side of the Workhouse foundation (Table 2).

At the very least, data from test borings do not refute the location proposed here as the site of what remains of the Workhouse foundation, and, in fact, they tend to confirm it. It should be relatively simple to verify this location during the landscaping of the plaza.

Archaeological Evaluation

Although the presence of the foundation is historically important, archaeological data to augment or refute the written record in terms of diet, activities, or social and economic factors would be found in the cisterns, privies, or middens (trash dumps) associated with the building. Pictures and prints indicate that no such features were located to the front or sides of the building, nor would they be expected in these areas. Should they exist within the project area, the most likely location for them would be behind the building, or nearer the east channel of the river. Both the fact that the building faced Manhattan and several suggestions to put workshops and storage buildings along the east side of the island (e.g., CPCCAR 1867: 90, 1868:89), indicate that this was the utilitarian part of the site.

As noted earlier, just as the construction history of the Workhouse--with its blasting and land alteration--would have destroyed prehistoric deposits on the site, the activities that followed its abandonment undoubtedly damaged or destroyed historic deposits. These include the grading of Main Street, the laying of utility lines along and under this street, and the installation of the waste lines for the AVAC trash disposal system used on the the island. (AVAC line traverse the parking lot scheduled for development and cross the site approximately 50 ft. west of Main Street [Hinninger 1985:personal communication; Envirogenics Co. 1976].) The construction of both the Motorgate and AVAC buildings and the activities of the Fire Training College, which apparently involved building structures and setting them afire (Loughlin 1985:personal communication), would also have caused destruction.

Given the site's disturbance, and the fact that much of the Workhouse foundation appears to be located within an area scheduled only for landscaping and therefore will not be destroyed, no archaeological investigation is recommended. However, it has been suggested to the developer that an attempt be made to find and, if possible, expose all or part of the foundation located within the landscaped plaza proposed for the site.

Ideally, should this foundation be located, it could be exposed and incorporated into the plaza design, creating a dramatic and permanent commemoration of this defunct but historically and socially important institution. If the foundation is located, it is recommended that an archaeologist photograph it in

order to document its location and the building techniques used in its construction. Should no evidence for it be found, at the very least, a plaque marking the site is recommended.

CONCLUSIONS

Research has produced considerable information about the long-defunct Workhouse on Roosevelt Island. We know when, where, and why it was built. We know its size and configuration and approximately how many people it housed annually. We know what they wore and can speculate about what they ate and did. We know that running water was available in the nineteenth century and with it steam heat and, by 1879, at least some indoor toilet facilities. We also can deduce some of the prevailing social attitudes and concerns from the focus of the annual reports of various superintendents in the nineteenth century and a personal account in the twentieth. What we do not know is where features such as privies, cisterns, and trash dumps--the source of social and economic data in an archaeological context--were located, or even if they were situated within the project area. Moreover, should these facilities have been on the site, they undoubtedly were disturbed or destroyed by subsequent development and therefore do not warrant archaeological investigation.

Yet, using the records, it is possible to reconstruct a great deal about the function of the Workhouse and place it within an historical and social perspective. With the cooperation of the developer, it also may be possible to document its foundations and the methods used in its construction, and to mark its site for posterity.

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WORK HOUSE, B. I.

OFFICE WORK HOUSE,
Blackwell's Island, December 31, 1863.

S. DRAPER, ESQ., *President and the Commissioners of Public Charities and Correction :*

GENTLEMEN—Following I present you with the Annual Report of this Institution for the year ending December 31st, 1863.

CENSUS REPORT FOR THE YEAR

	MEN.	WOMEN.	TOTAL.
Number on hand December 31st, 1862	233	830	1,063
" received during year	3,072	10,121	13,193
Total	3,305	10,951	14,256
Number discharged	2,967	9,976	
Number eloped from this and other institutions	59	51	3,063 10,096 13,159
Number died	37	69	
Number on Registers Dec. 31, 1863	242	855	1,097
Of this number there are transferred to other departments	60	226	292
Number remaining in building	180	629	815

Our average number of Inmates for the year was 732 $\frac{259}{365}$, whilst that of the preceding was 960 $\frac{137}{365}$, showing a decrease of 227 $\frac{334}{365}$.

This gradual falling off I can only account for by the existing war, which has carried off the able-bodied men, enabling them by this means to forward their pay, or a portion of the same, to their families, connections, &c., and thus keeping them from becoming dependent upon the Public Charities of the City.

NAME, RANK AND AMOUNT OF SALARY PAID EACH EMPLOYEE OF THIS DEPARTMENT.

NAME.	RANK.	ANNUAL SALARY.	
John Fitch	Superintendent	1,500 00	
Charles W. Smyth	Clerk	800 00	
William Scully	Engineer	700 00	
James Noonan	Keeper	650 00	
Fentin Phelan	"	650 00	
James V. Le Roy	"	650 00	
Hiram Diltz	"	650 00	At Ward's Island.
Thomas Kelly	"	650 00	
Patrick Jamison	"	650 00	
James Smith	"	650 00	
John De Mott	"	650 00	
Mary Hallinan	Matron	350 00	
Aletta J. Frost	"	350 00	
		$8,900 00	

The receipts from Contracts this year have not met the expectations I hoped for in my last Annual Report. This is owing to the high price of material, &c., requiring both of the Hoop-skirt Contractors, Mr. O. H. Barnard and

Appendix A. NORTHTHOWN PHASE II: Annual Report, 1863, for the Workhouse on Blackwell's Island (Published in the Fourth Annual Report, Board of Commissioners of Public Charities and Correction [in the text as CPCCAR] 1863; New York Historical Society)

Mr. Theodore Schmidt, to reduce their number of hands, and at various times to suspend work altogether, until at the present time we have but barely 18 inmates on this kind of work.

About the latter end of October the Commissioners entered into a Contract with Mr. S. C. Brown for the manufacture of Segars, who, at this date, is working 380 inmates; everything looks favorable that this will be a successful as well as profitable source of income to the department, also to the inmate, who on leaving here, if anxious and desirous to lead a sober and industrious life, has a trade at his or her command with which they can obtain almost instant employment.

For amount of earnings from contracts during the year, I would refer you to the following table:

EARNINGS FROM CONTRACTS.

Mr. O. H. Barnard	Hoop Skirts	$822 12
Mr. Theodore Schmidt	"	3,580 60
Mr. S. E. Brown & Co	Segars	1,656 18½
		$6,008 80½

For our Sewing-room operations I would refer you to the Tables annexed, which show the number of Articles manufactured for Store, Randall's Island, own use, &c., together with the number of Garments repaired.

The Male portion of our inmates has been of a very inferior class, being, as you might say, the refuse of the recruiting offices in the city. From such as these we have supplied all the help required for Randall's and Ward's Islands, Bellevue Hospital, Lunatic Asylum, Bake House, and Steamboat, and keeping up a gang on the Lunatic Asylum grounds, grading, &c.

Our Shoemakers have been employed in making new work and repairing for the Store, and other departments, as well as supplying our own wants. I would respectfully call your attention to the Tables attached, showing the number of New and Repaired Shoes.

The Tailors have been profitably engaged in making and repairing Clothing for Store, Randall's Island, and other Institutions, at the same time manufacturing all the new Clothing we required ourselves and keeping that in use in repair.

The Blacksmiths have done all the general work and jobbing required for this department, making all the Iron work for the new Lunatic Asylum, sharpening and repairing Quarry Tools, besides sundry work for various Institutions, as we were ordered.

The Tinsmiths have kept us amply supplied with new work, done all the repairing required, manufactured new

Articles for the Store, &c., and filled all orders for jobbing, &c., that were given them.

The Carpenters have been principally employed in making Coffins for Out-door Poor, Bellevue and Island Hospitals, Lunatic Asylum, Alms House, &c., &c., and would refer you to the Tables attached for the amount. They have also been employed in fitting up and altering Contract Shops, and doing the various jobbing and repairs necessary to an Institution like this.

The Masons have cut and laid 2,645 feet of Flagging on the north end of the Building, and 700 feet of Curb from the Steamboat Dock to the middle Building. They have also done all the requisite repairs, plastering, &c., required from the damages caused by the explosion of the powder magazine at the foot of 78th st., East River, on the night of 11th of May last.

On the 27th of April, the schoonor Margaret Havens fouled our Croton Water Pipe, crossing at 70th street, broke the same so badly as to require the whole to be taken up, and 29½ feet of new inserted. We had to again "serve" it with spruce yarn and marline, at a considerable expense.

I would here say, that, at the present time, both lines of Pipe, from 70th and 79th sts., are, as far as I can ascertain, in good working condition, and afford the Island the usual supply of water.

From the explosion of the powder magazine theretofore alluded to), our building suffered severely: the roofs were injured, sashes, blinds, and glass were broken, the plaster on the ceilings and walls was thrown down, the doors were torn down, and also resulting in damage to the furniture, thus laying this department under a heavy outlay, which has seriously increased our expenses for the year.

Mr. C. W. Smith, the Clerk, has co-operated with me, and faithfully performed the duties of his department; and I here express my thanks for the meritorious manner with which he has discharged the same.

The Keepers and Matrons have performed the duties assigned them with diligence and attention, for which they are entitled to much credit, both from myself and the Board.

MANUFACTURED GOODS, STOCK, &c., TURNED INTO STORE DEPARTMENT.

12 pairs men's shoes.
3 " " boots.
48 " " slippers.
6 " " crippled shoes.
187 " women's slippers.
14 " " boots.
Repairing 1,424 pairs shoes for Randall's Island.
" 653½ " Alms House.
" 176 " Penitentiary
" 20 " Bellevue H'l
Made 244 suits clothes for colored orphans
Altering 1,069 soldiers' coats.
Repairing 4,366 pieces clothing, Randall's Island.
90 pairs kersey pants.
4 kersey overcoats.
74 women's dresses.
800 girls' calico dresses for Randall's Island.
300 calico hoods.
396 boys' shirts, white.
306 girls' petticoats.
164 men's caps.
12 " shirts.
10 women's petticoats.
6 " chemises.
169 bed-ticks.
27 shrouds.
Repairing 2,643 pairs stockings for Randall's Island.
39 lbs. cotton yarn.
55 doz pairs women's stockings,
41½ " " men's socks.
921 large coffins.
536 small "
682 bedstead blocks.
18 feet oak plank.
5 bread boards.
1 wooden leg.
1 gang-plank for steamboat.
31 peels for bake-house.
17 wheelbarrows repaired.
1 bread-tray "
6 new wheelbarrows.
6 tin boilers, large.
1 coffee kettle.
110 dippers.
80 dozen mess-pans.
54 tin pails.
96 sauce-pans.
Repairing tin ware for Bellevue H.
" " Randall's Island.
" " Bake House.
24 dinner dishes, with covers.
24 dish-pans.
60 dozen tin cups.
12 boilers repaired.
1 watering pot.
4 sheets tin.
108 dust-pans.
1 kettle, 25 gallons.
1 " 4 "
144 wash-basins.
16 feet tin leader.
3 kettles, 15 gallons.
1 coffee-pot.
1 potato-strainer.
16 iron spikes,
2,153 quarry tools repaired.
2 bolts and band, for steam pipes.
1 gate-stop and iron braces.
2 iron dogs, with bolts.
4 hooks and 6 links.
Nuts, plates, and hooks for 2 pairs hinges.
23 staples and 8 hooks.
4 pairs hinges repaired.
14 lbs. nails.
93 pairs hinges, with hooks, bolts, and nuts.
1 fire-rake.
Altering bedsteads.
36 rivets and bars.
4 iron plates.
2 raisers and screws.
2 slice bars.
1 pump-handle.
6 iron rods.
30 harrow pins.
1 truck axle.
Blacksmith's jobbing for new Lunatic Asylum.
4 crow-bars.
Repairing quarry tools.
" iron work for steamboat
2 pairs ice-hooks.
1 furnace rake.
1 hammer.
16 horse-shoes.
3 iron hold-fasts.
1¼ bushel coal.
7 squares glass.
158 lbs. crackers.
100 " tarred rope.
220½ yards gingham.
1 barrel white sand.
3 " grease, 826 lbs.

HOUSE OF GOOD SHEPHERD.

79 dress skirts.
30 pillow-cases.
7 sheets.
12 chemises.

ARTICLES MANUFACTURED AND RETAINED FOR OWN USE.

5 pairs women's boots.
1,561 " women's slippers.
301 " men's shoes.
4 " " slippers.
4 " " footed boots.
2 leather belts.
33 men's vests.
82 pairs men's kersey pants.
134 kersey jackets.
11 kersey overcoats.
197 pairs kersey mittens.
983 women's dresses.
84 flannel shirts.
630 shirts.
303 hoods.
39 shrouds.
89 aprons.
4 coffee bags.
1,105 chemises.
11 bed ticks.
621 petticoats.
16 window curtains.
144½ doz. pairs women's stockings.
78 doz. pairs men's socks.
17 coal hods.
2 tea kettles.
2 soup ladles.
11 saucepans.
73 doz. mess pans.
4 skimmers.
12 pie dishes.
9 boilers.
18 soup turreens.
24 tin pans.
30 tin dippers.
1 garden syringe.
17 feet tin leader.
2 tea pots.
11 tin pails.
12 tin meat pans.
4 doz. tin cups.
2 chamber pails.
2 cullenders.
12 tin plates.
24 dust pans.
2 coffee pots.
6 grate pans.
1 chimney pot.
8 fire shovels.
6 wash-basins.
23 cot bottoms.

GARDENER'S REPORT OF QUANTITY AND KIND OF VEGETABLES RAISED.

15,000 head of cabbage.
1,000 " celery.
700 bushels of potatoes.
170 " beets.
250 " carrots.
220 " turnips.
100 " tomatoes.
100 squashes.
100 bushels onions.
1 " peppers.
4 " egg plants.
3,000 heads salad.
20 bushels Lima beans.
10 " peas.
Large quantity of parsley.

(Note: this information is also presented in Table 1 on p. 38)

Table showing our Net Expenses, with the daily average number of Inmates, and the Cost of keeping each, per Year, Month and Day.

Net expenses	$35,351 43
Daily average	$732 $\frac{329}{365}$
Yearly cost of keeping each Inmate	$48 23½
Monthly " "	4 02
Daily " "	13½

Table showing the Debtor and Creditor Account of the Department for 1863.

To amount of Inventory, January 1, 1863	$12,419 97	
" Requisitions, &c	42,829 00	
" Salaries	8,660 42	
" Fresh Beef	10,809 84	
		$74,719 23
By Goods manufactured and turned into Store Department	$8,315 76½	
By Salary of Hiram Diltz, Keeper City Cemetery	650 00	
By Contract—O. H. Barnard, Hoop Skirt	822 12	
" Theodore Schmidt, Hoop Skirt	3,530 50	
" S. O. Brown & Co., Segar	1,656 18½	
By amount of Inventory, December 31, 1863	24,393 23	
By balance net expenses	35,351 43½	
		$74,719 23

I conclude, gentlemen, thanking you sincerely for the prompt attention you have given me in all the emergencies that have arisen during the year, together with your immediate co-operation with all my requirements.

Respectfully yours,

JOHN FITCH,

Superintendent.

ACKNOWLEDGMENTS

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